

1971

## 1971 Annual Report Nebraska Game and Parks Commission

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# 1971 Annual Report



**Nebraska Game and Parks Commission**

121-1-1111-11



## I N T R O D U C T I O N

CHANGE -- That was the order of business for the Game and Parks Commission during 1971.

With a new director, Willard R. Barbee, in his first full year at the helm, the agency completed the reorganization procedures begun during 1970; Lincoln-based personnel moved into the new headquarters complex at 2200 North 33rd Street, and tourism-promotion responsibilities were transferred by the Legislature to the State Department of Economic Development. Many belts had to be tightened and work loads shifted, as state government moved into an era of slim budgets.

This second year of the 70's heralded a reassessment and reappraisal of existing policies, procedures, and goals. It is a question-asking period, with serious deliberations on the "why" of a variety of methods and operations. In some instances, this study is simply re-enforcing tried-and-true procedures. On the other hand, it also is producing some new and better ways to carry out the responsibilities assigned to the department under the law.

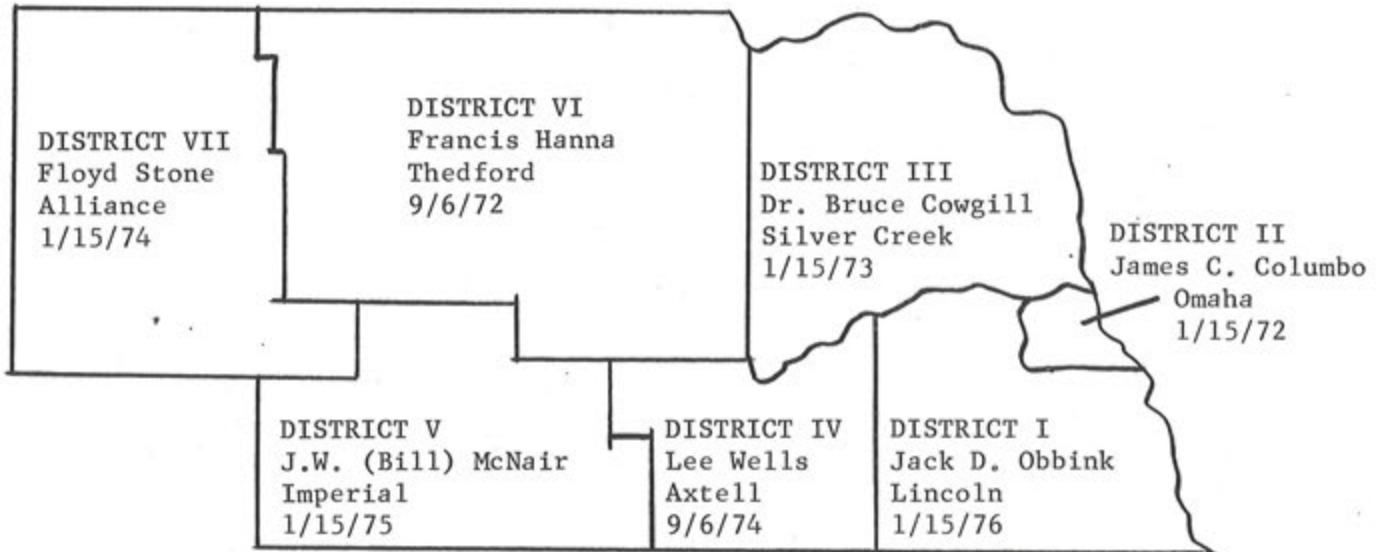
The re-awakened concern for the environment among Americans in general has created a unique opportunity for this agency to make many strides in its stewardship of the outdoor resources of the State of Nebraska. At the same time, the department enjoys a better position than ever before as far as implementing its wishes as they apply to a variety of projects. The Environmental Protection Act and other legislation have made the Commission a full partner in decisions that will affect our environment. While all of this requires many more hours of work, it is a challenge for an agency with the will to pioneer new pathways in conservation and management.

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# COMMISSION DISTRICTS, APPOINTEES, EXPIRATION OF TERM



## DIRECTOR

Willard R. Barbee

## ASSISTANT DIRECTORS

William J. Bailey, Jr.

Richard J. Spady

## CHIEFS

Budget and Fiscal Division.....Lyle D. (Jack) Hanna  
 Engineering Division.....Lyle K. Tanderup  
 Field Services Bureau  
   Fisheries Production Division.....Glen R. Foster  
   Law Enforcement Division.....Carl E. Gettmann  
   Resource Services Division.....Harold K. Edwards  
 Information and Education Division.....Dick H. Schaffer  
 Parks Bureau.....Jack D. Strain  
 Personnel Division.....Lloyd M. Steen  
 Planning and Programming Bureau  
   Land and Water Division.....Delvin M. Whiteley  
   Federal Aid Division.....Larry Witt  
 Wildlife Services Bureau.....C. Phillip Agee  
   Aquatic Wildlife Division.....Robert Thomas  
   Research Division.....Earl Kendle  
   Terrestrial Wildlife Division.....Ken Johnson

## B O A T I N G

The year 1971 saw an all-time high for boating in Nebraska, with just under 29,000 boats registered. In 1960, the first registration year, less than half that number were licensed, roughly 14,000.

Although the number of registered boats has more than doubled from 1960 to 1971, the accident rate has dropped by about two-thirds. Injuries were down to one, and deaths held about the same.

<u>Year</u>	<u>No. of Boats Registered</u>	<u>No. of Accidents</u>	<u>No. of Injuries</u>	<u>No. of Deaths</u>
1960	14,000	28	14	7
1971	28,798	12	1	6

To visualize how Nebraska boating safety has improved, if the number of casualties in 1971 had remained at the proportionate level of 1960, statistics would have read 58 accidents, 30 injuries, and 15 deaths.

The Game and Parks Commission, Red Cross, and Lincoln Department of Recreation gave courses in canoeing and water safety. These courses were open to the public, ages nine years and up, if they could swim for 10 minutes with their clothes on. Upon completion of the course, students received the Red Cross basic canoeing certificate. If the students were Boy Scouts, Girl Scouts, or Campfire Girls, they also received their respective badges.

This course was also presented at 4-H camps throughout the state. In addition, programs on boating and water safety were given at many schools across the state. Concordia Teachers College in Seward again showed great interest in the field of boating and water safety and arranged courses throughout the year. Conservation officers throughout the state assisted the program with lectures and demonstrations on boating safety, while the Information and Education Division kept the people informed on matters vital to boating and water safety.

The Game and Parks Commission was represented at the South Central States Boating Law Administrators Association in Sante Fe, New Mexico, and at the National Association of State Boating Law Administrators in Tampa, Florida. In 1972, the South Central States Boating Law Administrators Association meeting is scheduled to be held in Lincoln, Nebraska, in April.

## B U D G E T   A N D   F I S C A L

Budget and Fiscal Division includes three sections: (1) Permits, which encompasses the Boating Administration, Accounts Receivable, and Permit Accounting departments; (2) Fiscal, which encompasses audits, voucher payments, and data processing, and (3) Plant and Equipment, responsible for coordinating all purchases, maintenance of the agency's inventories of equipment, and administration of the agency's Record Management Systems.

The division chief and administrative staff are also responsible for the preparation of the agency's Annual Budget Request and administration of the Annual Legislative Budgetary Appropriations.

Major functions of the Budget and Fiscal Division include:

1. Maintain all fiscal records in accordance with state and federal laws,
2. Maintain area cost accounting on income and expenditures for internal control of the Commission,
3. Administer the fiscal operation and control of federal programs,
4. Administer the fiscal control of the state boating laws,
5. Issue all hunting and fishing permits to vendor accounts,
6. Receive, deposit, and maintain accounts receivable records on all funds received by the Commission,
7. Prepare the Commission's annual budgets,
8. Prepare and maintain the Commission's fiscal and operating budgets,
9. Administer the purchasing of all equipment, supplies, and materials for the Commission,
10. Maintain inventory control and records of all personal property of the Commission,
11. Perform audits of federal programs relating to participating subdivisions and internal audits of the other divisions of the Commission,
12. Administer an internal program of forms control, including development of forms and defining their purpose, use, and retention, and
13. Perform other administrative functions as assigned by the Board of Commissioners, Director, and/or Assistant Directors.

### PERMIT SECTION:

Responsibilities include: Receipting all income received by the agency; maintenance of area income cost-accounting records; issuance of all hunting and fishing permits to vendor accounts; administering the bonding of all vendor accounts; maintenance of detailed cost accounting on all permit vendors; administration and issuance of all big-game permits; issuance of all boating certificates; preparation of individual state auditor receipts on all income received and depositing such income with the State Treasurer, and preparation of monthly income reports and various annual reports.

With the move from the State Capitol into the new headquarters, a customer service center was established in the lobby of the new building to serve the general public. This center is staffed by three employees, who issue all types of permits and perform the function of boating administration. The center is supervised by the chief of the Permit Section.



Boating Administration: Activities continue to increase each year. In 1971, a total of 28,798 boat registration certificates was issued. Both an alphabetical list of boat owners and a file of boat numbers are maintained to assist administrative and enforcement activities. Annual reports to the U.S. Coast Guard and to each Nebraska county assessor are prepared and distributed.

Accounts Receivable: Activities remained similar to 1970 levels, with 167 cash transmittal reports prepared and submitted to the State Treasurer. These reports represent deposits of all cash income received by this agency. A total of 13,811 individual auditor receipts was prepared to support monies received and deposited by cash transmittals for 1971.

Permit Accounting: During 1971, this department maintained accounting records of permits issued and payments received on approximately 1,200 individual vendor accounts. Detailed accounting records that reflect the type of income generated by agency-operated facilities were maintained for each area that produces income. Monthly income reports are prepared, and an annual report of number of permits sold by type of permit by counties is compiled.

#### FISCAL SECTION:

Responsibilities include: Preparation and processing of all expenditure payments to various vendors for the agency; processing and paying all employee expense vouchers; processing transfer of costs from suspense accounts to area accounts for wages, employee operational costs and equipment usage; maintenance and coordination of data-processed, agency-expenditure reports with the State Department of Administrative Services; performing audits of all political subdivision's Land and Water projects; maintaining and preparing monthly sales-tax reports on the agency's area sales, and preparing various monthly and annual expenditure reports.

Overall, activities of this section increased over 1970 levels. A total of 15,521 individual vouchers was prepared and processed for payment during 1971. A vendor voucher-invoice file was installed, which will provide a cross reference for each vendor for which the agency transacts any payment. A single voucher payment to any vendor may include up to nine separate invoices that are being paid by one check. The perpetual maintenance of this voucher-invoice file will provide audit capability of paid invoices not previously available on a vendor basis.

During 1971, nineteen post audits, progress audits, and final-completion audits of political subdivision projects were performed.

Various expenditure reports were prepared, including the monthly report of paid vouchers for the Board of Commissioners.

#### PLANT AND EQUIPMENT SECTION:

Chief of this section is also the purchasing agent for this agency and is responsible for direct, vendor purchases of materials, supplies, and equipment under authority granted by the state purchasing agent. In addition to handling direct purchases, this section also processes all agency requisitions for materials, supplies, and equipment through the State Purchasing Office for items that exceed our direct purchase authority, processes related purchase orders, and expedites delivery. This section coordinates the agency's vehicle motor-pool operation with the State Transportation Department; maintains inventory systems on all equipment, and administers the agency's Record Management System.

FINANCIAL STATEMENT

January 1, 1971 - Cash or General Fund Appropriations on Hand:

Game Fund	316,934.89
State Park Facilities Cash Fund	119,304.72
Tourist Promotion Cash Fund	49,614.74
Land and Water Conservation Cash Fund	91,411.69
Total agency operational costs - General Fund	176,114.82
Total agency capital improvement - General Fund	<u>1,045,579.27</u>

Total Cash and General Fund Appropriation on Hand, January 1, 1971	1,798,960.13
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Cash Revenue Received during 1971

Game Fund	4,077,513.00
State Park Facilities Cash Fund	258,950.91
Tourist Promotion Cash Fund	23,144.41
Land and Water Conservation Cash Fund	861,586.93
Total agency operational appropriation - General Fund	1,896,922.05
Total agency capital improvement appro- priation - General Fund	<u>1,771,179.02</u>

Total Cash Revenues Received and General Fund Appropriations available during 1971	8,889,296.32
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Total Expended by Fund Type

Game Fund	3,218,280.71
State Park Facilities Cash Fund	248,041.06
Tourist Promotion Cash Fund	10,388.24
Land and Water Conservation Cash Fund	844,342.27
Total agency operational costs - General Fund	1,414,451.00
Total agency capital improvement - General Fund	<u>879,696.54</u>

Total Agency Expenditures, 1971	6,615,199.82
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January 1, 1972 - Cash and General Fund Appropriation on Hand

Game Fund	1,176,167.18
State Park Facilities Cash Fund	130,214.57
*Tourist Promotion Cash Fund	62,370.91
Land and Water Conservation Cash Fund	108,656.35
Total agency operational costs - General Fund	658,585.87
Total agency capital improvement - General Fund	<u>1,937,061.75</u>

Total Cash and General Fund Appropriation on Hand, Jan. 1, 1972	4,073,056.63
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*Less Tourist Promotion Cash Fund transferred to Economic Development	<u>(62,370.91)</u>
Total adjusted Cash and General Fund Appropriation on Hand Jan. 1, 1972	4,010,685.72

SOURCE OF INCOME

## Hunting Activities:

<u>Source</u>	<u>Amount</u>	<u>Total</u>
Resident License to Hunt	450,180.00	
Nonresident License to Hunt	464,600.00	
Resident Trapping License	5,342.00	
Nonresident Fur Buyer Permit	1,050.00	
Resident Fur Buyer's Permits	460.00	
Deer Permits	384,850.00	
Antelope Permits	13,310.00	
Turkey Permits	15,630.00	
Game Farm and Pet Permits	1,186.15	
Buffalo and Venison Sales	563.50	
Duck Blind Rental	2,968.50	
Controlled Shooting Area	240.00	
Beaver Seals	16.00	
Hunter Packet	<u>2,156.50</u>	
		1,342,552.65

## Fishing Activities:

<u>Source</u>		
Resident License to Fish	602,604.00	
Nonresident 5-day License to Fish	47,762.50	
Nonresident Annual License to Fish	67,518.00	
Bait Vendors	5,525.00	
Seining Vendors	4,815.00	
Private Fish Hatchery License	520.00	
Trout Permits	58,285.50	
Sale of Food Fish	1,655.42	
Commercial Put-and-Take Fish Hatchery	<u>550.00</u>	
		789,235.42

## Hunting and Fishing Activities:

<u>Source</u>		
Resident Combination Hunt and Fish License	<u>431,528.00</u>	
		431,528.00

## Special Stamps:

<u>Source</u>		
Upland Game Bird Stamp	<u>159,339.00</u>	
		159,339.00

## Federal Reimbursements:

<u>Source</u>		
Pittmann-Robertson & Dingell-Johnson	<u>874,969.56</u>	
		874,969.56



Miscellaneous Receipts:

<u>Source</u>	<u>Amount</u>	<u>Total</u>
Nebraskaland Magazine:		
A. Subscriptions	163,519.00	
B. Newstands	8,475.40	
C. Advertising	<u>38,411.76</u>	
Duplicate Permits	210,406.16	
Liquidated Damages	982.00	
Calendar and Binders	8,435.00	
Sale of Surplus	12,406.10	
Agricultural Lease and Crop Income	13,329.31	
Boating Permits	59,973.96	
Iron Horse Trail Land Sales	155,764.00	
Sales Tax	17,311.00	
Incidentals	212.85	
	<u>1,067.99</u>	
		479,888.37

Total Game Fund Income	<u><u>4,077,513.00</u></u>
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STATE PARK CASH FUND INCOME

Park Facilities:

<u>Source</u>		
Arbor Lodge	8,469.28	
Buffalo Bill Rest Ranch	3,586.73	
Chadron	34,641.92	
Fort Kearny	1,214.95	
Fort Robinson	81,624.16	
Lake McConaughy	9,728.58	
Mormon Island State Wayside Area	10,595.88	
Niobrara	25,353.82	
Ponca	42,575.39	
Sherman Reservoir	4,747.50	
Two Rivers	14,298.71	
Victoria Springs	1,865.00	
Windmill State Wayside Area	6,468.87	
Miscellaneous Areas	<u>8,919.61</u>	
		254,090.40

Park Non-Operating Income:

<u>Source</u>		
Surplus Property Sales	338.03	
Rent on State-Owned Houses	<u>4,522.48</u>	
		<u>4,860.51</u>
Total State Park Cash Fund Income		<u><u>258,950.91</u></u>



<u>Source</u>	<u>Amount</u>	<u>Total</u>
Tourist Promotion		
Sale of Promotional Material	22,129.54	
Nebraskalander Program	865.00	
Sales Tax	<u>149.87</u>	
		23,144.41
Land and Water Conservation Fund		
Federal Reimbursement	861,546.93	
Agricultural Lease	<u>40.00</u>	
		<u>861,586.93</u>
Total Special Cash Fund Income		<u>884,731.34</u>
Summary of Income Received During 1971		
Game Fund	4,077,513.00	
State Parks	258,950.91	
Special Cash Funds	<u>884,731.34</u>	
Total Income Received During 1971		5,221,195.2

## 1971 EXPENDITURES

Purpose of Expenditures - Operation Costs	<u>Amount</u>	<u>Total</u>
Program: 336- Wildlife Conservation, Enforcement, Promotion and Development		
Sub-Program - 01 - Enforcement	591,048.17	
Sub-Program - 02 - Information & Education	703,877.74	
Sub-Program - 03 - General Supervision	356,027.72	
Sub-Program - 04 - Game	209,321.46	
Sub-Program - 05 - Fish	533,061.63	
Sub-Program - 06 - Land Management	398,783.36	
Sub-Program - 07 - Research	<u>140,673.54</u>	
		2,932,793.62
Program: 323 - Tourism		
Sub-Program - 08 - General Promotion	27,890.93	
Sub-Program - 09 - Promotional Resale Ma- terials	<u>10,388.24</u>	
		38,279.17
Program: 325 - Boating Administration, Education and Enforcement	<u>71,975.16</u>	
		71,975.16

Program: 549 - Parks Administration, Enforcement and  
Operation

General Fund Expenditures	775,444.07	
Cash Fund Expenditures	<u>227,768.49</u>	
		1,003,212.56

Program: 550 - Federal Aid and Planning Functions

General Fund Expenditures	109,620.81	
Cash Fund Expenditures	<u>20,483.74</u>	
		130,104.55

Program: 617 - Engineering and Area Maintenance

General Fund Expenditures	501,495.19	
Cash Fund Expenditures	<u>118,541.06</u>	
		<u>620,036.25</u>

Total Expended Operational Costs		4,796,401.31
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Purpose of Expenditure - <u>Capital Improvement</u>	<u>General Fund</u>	<u>Cash Fund</u>	<u>Total</u>
Program Number			
899 - Aerospace Museum	28,114.27		28,114.27
900 - Indian Cave State Park	25,114.02	25,108.81	50,222.83
901, 902, 905 - Political Subdivisions	243,871.26	495,370.20	739,241.46
903 - Gibbon Interstate Wayside		94,276.27	94,276.27
904 - Grand Island Inter- State		19,863.30	19,863.30
906 - Ponca State Park	66,446.54	66,446.53	132,893.07
907 - Gretna Fish Hatchery		2,423.32	2,423.32
908 - Two Rivers	7,647.42	7,647.45	15,294.87
910 - Fremont Lakes	28,629.49	28,629.50	57,258.99
911 - Arbor Lodge	5,914.51	.00	5,914.51
912 - Branched Oak Reservoir	17,460.57	17,460.59	34,921.16
913 - Lincoln Lab Building		96,269.27	96,269.27
915 - Grove Lake		7,623.68	7,623.68
916 - Lewis and Clark Lake	17.03	17.03	34.06
917 - Fort Hartsuff	30,497.94		30,497.94
918 - Crosstrails Wayside Area	184.00	184.00	368.00
919 - Fort Kearny	36,200.24		36,200.24
920 - Sacramento Game Mgmt. Area		1,860.62	1,860.62
921 - Johnson Reservoir	1,200.00	3,011.37	4,211.37
922 - Enders Reservoir	11,085.44	11,085.45	22,170.89
923 - Red Willow Reservoir	1,392.36	1,392.37	2,784.73
924 - Medicine Creek Reser- voir	7,608.64	7,608.65	15,217.29

925 - Swanson Reservoir	2,591.77	2,590.78	5,182.55
928 - Lake McConaughy	6,388.85	6,388.85	12,777.70
929 - Ash Hollow	33,489.04		33,489.04
931 - Fort Robinson		508.03	508.03
933 - Plattsmouth		900.00	900.00
934 - Dead Timber	7,607.38	7,607.37	15,214.75
935 - Fort Atkinson	19,456.52		19,456.52
936 - Memphis	3,381.88	3,381.88	6,763.76
938 - Swedeburg-Ceresco	1,736.36	1,736.32	3,472.68
946 - Brownville	574.65	574.65	1,149.30
947 - Alexandria Lake	563.18	563.17	1,126.35
948 - Iron Horse Trail		337.50	337.50
950 - Burchard Lake		1,316.19	1,316.19
955 - Elkhorn State Wayside Area	1,160.20	1,160.20	2,320.40
956 - Niobrara	1,408.30	699.82	2,108.12
958 - Cornhusker Game Mgmt. Area		16,105.34	16,105.34
963 - Sherman Reservoir	4,490.69	4,490.70	8,981.39
975 - Valentine Hatchery		299.00	299.00
980 - Chadron State Park	2,489.71		2,489.71
982 - Box Butte Reservoir	563.75	563.75	1,127.50
986 - Buffalo Bill Ranch	15,966.25		15,966.25
989 - Platte Valley I-80		336.00	336.00
990 - Buffalo Bill Arena	266,444.28		266,444.28
992 - Fish Population Con- trol	2,728.50		2,728.50
993 - Sandy Channel		535.51	535.51
<hr/>			
Total Expended Capital Improvement	879,696.54	939,101.97	1,818,798.51
Total Agency Expenditures 1971			6,615,199.82

1970 PERMITS ISSUED BY COUNTIES

COUNTY	RESIDENT FISH	RESIDENT HUNT	RESIDENT FISH-HUNT	NONRESI- DENT HUNT	ANNUAL NR FISH	5-DAY FISH	TRAP	UPLAND STAMPS	TOTAL AMOUNT
ADAMS	3,476	2,710	1,040	291	28	113	11	3,932	7,669
ANTELOPE	1,199	602	425	41	30	96	24	974	2,417
ARTHUR	58	12	17	1	1	7	2	24	98
BANNER	23	33	20	1	-	1	1	52	79
BLAINE	99	47	92	14	3	7	9	133	271
BOONE	739	745	347	191	31	31	15	1,252	2,099
BOX BUTTE	1,395	1,000	588	237	44	162	2	1,775	3,428
BOYD	449	244	199	23	14	36	16	351	981
BROWN	525	328	229	29	28	61	31	575	1,231
BUFFALO	3,970	3,154	1,443	347	75	225	43	4,685	9,257
BURT	1,147	705	303	110	17	33	25	986	2,340
BUTLER	730	606	361	23	12	20	30	916	1,782
CASS	2,496	1,316	714	41	69	93	38	1,844	4,767
CEDAR	606	673	239	162	8	33	24	1,020	1,745
CHASE	712	453	434	301	172	190	14	1,139	2,276
CHERRY	1,304	357	513	51	151	357	39	727	2,772
CHEYENNE	1,062	1,059	526	384	92	198	2	1,893	3,323
CLAY	728	682	399	217	21	42	15	1,274	2,104
COLFAX	1,066	787	484	78	11	25	35	1,239	2,486
CUMING	1,055	606	421	34	4	21	37	964	2,178
CUSTER	1,730	1,140	710	367	40	94	24	2,133	4,105
DAKOTA	1,347	1,384	319	502	232	110	32	2,076	3,926
DAWES	1,552	870	524	108	59	223	25	1,396	3,361
DAWSON	3,248	2,222	1,102	275	86	322	31	3,421	7,286
DEUEL	274	229	164	87	476	753	1	466	1,984
DIXON	614	455	247	61	29	29	17	731	1,452
DODGE	3,995	2,522	1,069	105	51	167	95	3,554	8,004
DOUGLAS	29,565	22,333	6,960	596	607	1,019	102	27,913	61,182
DUNDY	312	188	158	171	558	139	5	490	1,531
FILLMORE	702	705	380	232	5	20	13	1,272	2,057
FRANKLIN	290	360	181	127	9	16	3	664	986
FRONTIER	434	350	181	51	11	34	2	575	1,063
FURNAS	1,092	794	460	749	104	154	6	1,936	3,359
GAGE	2,769	1,774	872	554	86	116	45	3,047	6,216
GARDEN	881	322	322	159	539	1,247	9	684	3,479
GARFIELD	354	180	158	23	13	29	8	333	765
GOSPER	801	153	165	77	55	186	-	328	1,437
GRANT	238	56	54	4	11	29	18	81	410
GREELEY	329	343	178	65	11	13	-	561	939
HALL	6,091	4,048	1,852	339	68	284	32	5,968	12,714
HAMILTON	754	504	336	59	10	22	18	842	1,703
HARLAN	2,224	422	402	491	534	580	6	1,106	4,659
HAYES	60	75	49	22	3	2	1	144	212
HITCHCOCK	666	295	215	164	1,159	557	4	636	3,060
HOLT	1,556	685	823	40	22	99	57	1,190	3,282
HOOVER	161	58	109	3	8	12	1	150	352
HOWARD	717	423	383	81	13	44	22	847	1,683
JEFFERSON	1,092	866	466	353	37	45	35	1,625	2,894
JOHNSON	617	515	295	93	10	19	28	853	1,577
KEARNEY	591	586	266	163	22	73	-	1,020	1,701
KEITH	2,855	806	850	233	1,239	3,857	2	1,559	9,842



## 1970 PERMITS ISSUED BY COUNTIES

COUNTY	RESIDENT FISH	RESIDENT HUNT	RESIDENT FISH-HUNT	NONRESI- DENT HUNT	ANNUAL NR FISH	5-DAY FISH	TRAP	UPLAND STAMPS	TOTAL AMOUNT
KEYA PAHA	70	51	27	5	6	10	7	74	176
KIMBALL	448	436	215	139	86	75	1	761	1,400
KNOX	3,216	649	580	89	252	743	42	949	5,571
LANCASTER	18,271	10,948	4,641	3,303	227	574	82	18,343	38,046
LINCOLN	4,959	2,775	1,571	333	255	727	70	4,367	10,690
LOGAN	96	65	62	6	6	9	3	131	247
LOUP	140	53	56	8	1	10	4	100	272
MCPHERSON	66	13	26	-	3	1	2	38	111
MADISON	3,014	2,415	1,058	384	31	116	67	3,834	7,085
MERRICK	850	653	409	122	25	27	17	1,110	2,103
MORRILL	795	423	273	111	55	139	10	713	1,806
NANCE	531	421	248	48	8	20	14	678	1,290
NEMAHA	793	816	415	146	45	45	18	1,283	2,278
NUCKOLLS	437	565	227	152	20	14	6	895	1,421
OTOE	1,537	1,278	713	139	56	77	35	1,968	3,835
PAWNEE	528	253	227	135	64	25	8	565	1,240
PERKINS	262	249	158	95	24	23	-	528	811
PHELPS	998	882	441	332	37	64	2	1,619	2,756
PIERCE	910	502	326	50	24	48	11	849	1,871
PLATTE	3,120	2,323	1,301	229	65	129	65	3,730	7,232
POLK	581	373	314	44	6	19	5	698	1,342
RED WILLOW	2,645	1,365	700	744	1,012	1,054	19	2,767	7,539
RICHARDSON	1,441	872	668	276	326	115	13	1,489	3,711
ROCK	256	120	141	17	14	39	10	254	597
SALINE *	1,258	1,049	630	121	12	40	19	1,693	3,129
SARPY	3,315	2,640	897	108	56	138	26	3,289	7,180
SAUNDERS	1,501	1,096	584	56	17	33	56	1,626	3,343
SCOTTSBLUFF	4,156	2,513	1,255	223	267	364	32	3,543	8,810
SEWARD	1,421	1,116	595	138	12	37	33	1,765	3,352
SHERIDAN	1,047	621	419	123	43	86	26	1,126	2,365
SHERMAN	1,127	368	265	70	26	88	15	646	1,959
SIOUX	70	23	39	-	25	14	1	29	172
STANTON	346	172	187	39	7	13	8	369	772
THAYER	773	607	348	1,120	18	37	10	2,053	2,913
THOMAS	156	72	79	12	7	18	9	144	353
THURSTON	428	307	162	34	5	4	13	494	953
VALLEY	750	477	370	85	12	42	21	893	1,757
WASHINGTON	1,122	951	433	107	25	31	36	1,355	2,705
WAYNE	607	675	262	38	6	7	11	929	1,606
WEBSTER	554	422	211	337	31	36	9	933	1,600
WHEELER	208	64	65	-	2	24	14	116	377
YORK	1,376	1,096	563	252	18	35	8	1,854	3,348
COLORADO				174	377	74	-	175	625
IOWA	153		7	143	48	14	-	120	365
KANSAS				40	270	9	-	41	319
SOUTH DAKOTA	530	97	69	82	615	504	-	197	1,897
GRAND TOTAL	157,612	104,648	51,281	19,139	11,465	17,796	1,913	164,489	363,854

# 1970 PERMITS ISSUED BY COUNTIES

COUNTY	RESIDENT FISH	RESIDENT HUNT	RESIDENT FISH-HUNT	NONRESI- DENT HUNT	ANNUAL NR FISH	5-DAY FISH	TRAP	UPLAND STAMPS	TOTAL AMOUNT
TURKEY		2,813		80					2,893
DEER (RIFLE)		30,023		1,311					31,334
DEER (ARCHERY)		4,710		95					4,805
ANTELOPE (RIFLE)		1,660							1,660
ANTELOPE (ARCHERY)		90		14					104
GRAND TOTAL	157,612	143,944	51,281	20,639	11,465	17,796	1,913	\$164,489	404,650
	\$630,448	\$849,811	\$410,248	\$522,275	\$68,790	\$44,490	\$6,695.50	\$2,697,246.50	

## E N G I N E E R I N G

Composed of two sections -- Engineering and Operations, the division handles 15 functions. These include: (1) preliminary and final designs, (2) project specifications, (3) preliminary and final cost estimates, (4) special engineering studies, (5) B.O.R. project reviews, (6) preliminary, construction, and land surveys, (7) drafting services, (8) construction and inspection, (9) liaison with engineering and architectural consultants, (10) contracting construction projects, (11) project construction planning, (12) heavy maintenance, (13) force-account construction, (14) maintaining project records, and (15) feasibility studies.

To serve the ever-changing needs of the Game and Parks Commission the Engineering Division is striving to:

- (1) Provide the preliminary plans and estimates necessary to budget for future capital improvements;
- (2) Provide the Game and Parks Commission with a design and contracting organization to complete capital construction work;
- (3) Provide the engineering assistance necessary to maintain the existing capital improvements on the many areas owned and leased by the Game and Parks Commission;
- (4) Provide engineering assistance for the improvement of Game and Parks Commission-owned and controlled facilities to improve fish, game, and recreational facilities;
- (5) Provide the necessary specialized and heavy equipment required for regular heavy or specialized maintenance work on Game and Parks Commission facilities;
- (6) Provide for capital construction by force account where it is uneconomical or unfeasible to do the work by other means, and
- (7) To provide equipment and manpower for emergency and disaster situations.

### DESIGN ACTIVITIES

Branched Oak Reservoir: Design and layout activities included an underground primary distribution and lighting system and complete design of an adequate water system to the Children's Farmstead. Further anticipated study has been initiated toward effective segmental development of the area.

Central Office Building: Numerous activities were undertaken in the furnishing and interior-decorating layouts for the building. Specific miscellaneous designs have been accomplished for designated areas.

Chadron State Park: Anticipated design layout was completed for the campground development. Prior to and in advance of this layout, this office undertook a feasibility study and preliminary design of a sewer system to serve the entire park area. Further research and comparison of waste treatment facilities has been under consideration. Further plan design and layout include details necessary for swimming-pool repairs and water-piping renovation.

Champion Mill: Initial stages of exterior repairs were laid out for the renovation of the mill.



Fort Hartsuff State Historical Park: A design of the heating system for the Officer's Quarters and Hospital Building and a combination heating and air-conditioning system for the Post Adjutant's Office has been completed. In conjunction with this activity, the layout and details necessary for the interior renovation plans were completed, as well as the design of a latrine facility to complement the visitation needs for the area.

Fort Atkinson State Historical Park: The water-and-power study was completed for this area, including designs for a latrine facility.

Fremont State Recreation Area (South Unit): Developments for the campground were designed and laid out. These facilities will include approximately 100 camping pads, a shower-latrine building, area water system, a sanitary-dumping station, and numerous water hydrants. Additional segment plans designed call for renovation of the existing overhead primary to a complete underground distribution complete with trailer electrical outlets and lighting where needed, plus additional latrine facilities and support items. (North Unit): Designs for this area included renovation of the existing maintenance yard, complete with metal maintenance building with office, workshop, and bathroom partitions. Another segment of the north area development involves the complete design of day-use facilities with modern latrine buildings, area lights, a core water system for the entire north area, with provisions for anticipated future campground needs. Long-needed road improvements, relocation, and site work were also included. The problems encountered during construction period necessitated the design of water-filtration methods for both areas.

Gretna Fish Hatchery: The design was completed for the installation of a water-supply line to the existing hatchery house and for providing a new line to drain the fish display ponds in the canyon to the river. Layout, as described, is highly specialized and crucial to the effective utilization of the display ponds. Preliminary plans were also completed for the much-needed hatch house replacement for the area. These included capability of complete closed recirculation and filtration systems; exterior public-display aquariums, office, laboratory, and feed-equipment storage. Total renovation plans include replacement of the latrine facility and additional support facilities for public visitation and separation of the public from hatchery work functions. Much research has been needed on the recirculation and filtration systems as well as modern principles of effective hatchery functions.

Indian Cave State Park: The residence for the park superintendent was designed to be compatible with other typical installations. A power review and preliminary layout of distribution (both present and future) has tentatively been completed.

Louisville State Recreation Area: A complete total development of the area was designed. Facilities include a maintenance building, modern latrine building, complete sewer system including lift station to serve the entire area, a sanitary station, area lights, extension of water lines, complete renovation of existing electrical distribution, foot bridge, and the long-needed roadwork. Specialties of the design include the layout of a site plan to include all past installations and those proposed along with separate dredging operations to deepen fishing lakes and provide fill material for existing swamps and marsh area. All designs were geared for the intense public use of the area.

Killdeer Special Use Area: The design was completed for total development of facilities for handicap fishing opportunities. Separate design and details were completed for the installation of a fishing-pier facility, a power study has been advanced, and proper access layout completed.

Pawnee State Recreation Area: A complete preliminary study has been completed for expanded high-quality recreation facilities, with a total development plan for this area. High utilization of this area along with potential for modern facilities indicates an expanded program of scheduled development is well worthwhile. An individual detailed power-distribution and lighting study has been completed, as well as preliminary detailed initial segment of modern installation.

Ponca State Park: Various segments of design were completed. This included renovation of the existing water system to provide additional capacities necessitated by park expansion, paving designs and layouts of area roads, as well as repair of same. A complete design for the installation of a package-treatment plant for the two area residences is also available.

Valentine Fish Hatchery: A design layout of the hatchery water supply is now complete, in addition to plans for additional electrical work for the area.

Among the consultant coordinated projects were (1) the central headquarters building in Lincoln and (2) the Wild West Arena at North Platte. Land surveying activities included: (1) lot surveys, (2) water-rights surveys, (3) boundary-line surveys, and (4) building and road-location surveys.

#### MAJOR PROJECTS

- (1) General developments for the Southwest Reservoirs (Red Willow, Medicine Creek, Swanson, and Enders) involved construction of maintenance buildings for each area, modern latrines, water systems, and miscellaneous support items.
- (2) An asphalt lot was constructed to handle the parking needs at the central headquarters building.
- (3) A reception office was designed and contracted for the existing maintenance and headquarters facility at Lake McConaughy.
- (4) A residence for the assistant superintendent was constructed at Fort Kearny State Historical Park. This work also included an underground irrigation system, designed to irrigate the entire park area on an automatic system that would not interfere with park use and visitation.
- (5) At Buffalo Bill Ranch State Historical Park, a completely automatic underground irrigation system was installed to irrigate approximately 15 acres of the main activity and receiving areas of the park. The system will allow for extension, with control of time of use and degree of use as well.



(6) Memphis State Recreation Area was developed as a primitive area including area lights and roads.

(7) At Fort Hartsuff, work was contracted for the building of a superintendent's residence and a water system for domestic supply as well as fire protection. All anticipated renovation work depends upon the ability to protect the area from destruction along with continual resident effort of improvement of the area.

(8) At Ponca State Park, an asphalt extension of the existing road system was completed. Involved earthwork activities were required to finish the installation.

#### FORCE-ACCOUNT WORK

The addition of a tractor backhoe was utilized considerably for pond renovation and for utilities repair.

Emergency work was done at Two Rivers (flood damage), Swanson Reservoir and Johnson Lake, Lake McConaughy, and Niobrara State Park.

Supplementary force account work to capital improvement contract work primarily in the nature of roads, parking lots, site grading, guard posts, fire grates, and picnic tables was done at:

- (1) Dead Timber State Recreation Area: Road work, filling, and site improvements;
- (2) Construction of a sanitary-dumping station and sewage disposal system at Two Rivers State Recreation Area and additional necessary roads and access to the station;
- (3) At the Norfolk District Office, activities included the relocation of a maintenance building and reconstruction of access road;
- (4) Construction at Chadron State Park included the filling and removal of an old swimming pool and the heavy maintenance of the many park roads in the area;
- (5) At Nebraska City, crews undertook heavy earthwork activities in a cooperative effort with the U.S. Corps of Engineers in the construction of a marina boat-loading area;
- (6) For the Plattsmouth Waterfowl Management Area, a temporary booster, pumping facility was installed to provide the flooding capabilities at the area necessary to attract waterfowl, and
- (7) Numerous carpentry activities have been required for the installation of storage and work areas in the central office complex.

This partial list indicates the variety of activities accomplished by force-account work through the Engineering Division. The list is almost endless, when including all of the varied functions encountered.

Again, a shortage of personnel has resulted in beginning the 1972 season with a heavy backlog of work.

## BUREAU OF FIELD SERVICES

### F I S H E R I E S P R O D U C T I O N

Under the reorganization of the Game and Parks Commission which started in 1970 and continued in 1971, Fisheries Production was established as a separate division. The unit includes a division chief, secretary, and five fish hatcheries with a staff of 21 employees. The salvage and distribution section was also included until it was abolished in July 1971.

#### Administration

The administrative section directs and controls activities of the division; coordinates fisheries production with requirements of the Bureau of Wildlife Services, and issues special permits controlling commercial fishing, private fish hatcheries, bait vendors, and fish dealers.

Other activities involve cooperation with national fish hatchery personnel and other state fisheries personnel regarding fish trades and services. Record-keeping duties include cost-accounting on fish production, statewide fish-stocking, private and commercial fisheries, personnel, and general business records.

#### Special Permits Issued During 1971

<u>Type</u>	<u>Quantity</u>
Bait Vendors	196
Missouri River	180
Commercial Put and Take	11
Private Game Fish Hatcheries	26
Private Minnow Hatcheries	1
Nonresident Fish Dealers	6

#### GROVE LAKE TROUT REARING STATION

Located on the headwaters of East Verdigre Creek, 2½ miles northeast of Royal in Antelope County, Grove Lake is operated primarily to rear rainbow trout fingerlings to catchable size for the Two Rivers trout lake near Venice in Douglas County and also for stocking trout streams in northeastern Nebraska.

Trout-rearing facilities consist of eight earthen raceways, two spring-fed rearing ponds, plus two series of concrete raceways, each consisting of three double raceways 60 feet x 6 feet. The raceways were completed during late 1970.

This station does not hatch trout but brings in fingerling-size trout for rearing. During 1971, a total of 105,606 trout was stocked. The fish averaged 9.8 inches in length. Some 5,000 of the larger fish were held over to provide winter fishing at the Grove Lake during early 1972.



During the year, 142,188 fingerlings, 3 to 6 inches in length, were transferred to the station from the Rock Creek State Fish Hatchery and the Crawford National Hatchery. These will be reared to catchable size for stocking in 1972.

General maintenance and repair work, accomplished during the year, included keeping the grounds mowed, trimming trees, reseeding, repair of buildings, riprap of banks, and repair of screens. New raceways were etched, sealed, and painted with epoxy paint and new screens and drop logs constructed.

Trout-food vending machines for public enjoyment produced \$258.30.

#### GRETNA HATCHERY

Located 10 miles south of Gretna on Nebraska Highway 31, the hatchery production area consists of 5.5 acres of warmwater ponds and .4107 acres of semi-coldwater ponds. The latter are located in a canyon and will be used as fish display ponds for public viewing. There are also 445 feet of concrete raceways, which are used to hold cold and warmwater species at various times during the year.

The hatchery water supply consists of a 10-inch well, which pumps 700 to 800 gpm., and a natural spring which flows 80 gpm.

Buildings include three residences, a barn, garage, public restrooms, storage shed for oil and lubricants, shop and underground cave combination, and one deteriorated hatch house. There is also a small picnic area on the grounds with good facilities for normal public use.

Primary function of this hatchery was changed in 1971 from a trout-holding facility for Two Rivers to raising warmwater fish.

In 1971, 32 loads of trout were hauled from Rock Creek and Grove rearing station and stocked directly in the Two Rivers trout lake. This is less than half the number of loads hauled in 1970 when the fish were held at this station and stocked daily at Two Rivers. Both Rock Creek and Grove hatcheries hauled the remainder of their trout.

The hatchery superintendent of this station is responsible for preparing and operating the fish exhibit at the State Fair each year in Lincoln. A total of 348 man hours was spent at the exhibit building by Gretna Hatchery personnel alone. Another 200 hours were spent by other fishery personnel. Fish were supplied and hauled by Valentine Hatchery and Resource Services division.

Gretna Hatchery is also used as a shipping and receiving point for northern pike, walleye, and striped bass fry. Various other species of fish are hauled and distributed for management personnel.

A large amount of construction and repair work was accomplished during the year, such as repair and construction of new outlet spillways, lowering drain lines and installation of new drains, and construction of new live boxes, rearing troughs, shelves, racks, picnic tables. Trucks and other equipment were remodeled, repaired, and painted. A new utility building was constructed while other buildings were repaired, remodeled, and painted. Pond bottoms and dikes were reshaped and repairs made. Other

land areas were leveled and graveled or seeded. Dead tree stumps were removed, and 170 new trees planted. A new gas pump was installed and a considerable amount of replacement tools and equipment purchased.

### Fish Production Results

#### Striped Bass

Fish stocked 20,000  
 Fish harvested 2,628  
 10.5 lbs. @ 256/lb.  
 Number of pounds on per acre basis - 40  
 Number of fish on per acre basis - 10,338  
 Days in pond - 40  
 Percent survival 13%

Although 2,688 striped bass were harvested from a .26-acre pond, only 385 were stocked in Lake McConaughy. Approximately 900 fish died when introduced into the hatchery well-water supply (pH too low and CO<sub>2</sub> too high).

Approximately 1,400 fish died when a 1963 Ford pickup stalled at Beaver Crossing on the way to Lake McConaughy.

#### Channel Catfish

Late Ponds					1.77 ac.		
Ave. Length	Ave. Wt./lb	Ave. lbs./Ac	Ave. Survival	Days in Pond	Total Feed	Ave. Conversion	Total lbs. of Fish
8.7	6	1,616	96%	94	2775.25	1.943	2,942

Early Ponds					2.53 ac. Size		
Ave. Length	Ave. Wt./lb	Ave. lbs./Ac	Ave. Survival	Days in Pond	Total Feed	Ave. Conversion	Total lbs. of Fish
6.25	14.8	698.10	98.2	56	1483.50	.987	1748.25

TOTALS							
Acres	Stocking Rate	Total No. Harvested	Total Pounds	Total lbs./Ac. Water	Conversion	Survival	
4.3	10,000/ac	41,884	4,690.25	1157	.965	97%	

#### Fish Produced and Stocked

Species	Eggs	Fry	1-3"	3-6"	Over 6"	Total
Striped Bass			385			385
Channel Catfish					41,884	41,884

Fish Received from Other States and Stocked

<u>Species</u>	<u>Eggs</u>	<u>Fry</u>	<u>1-3"</u>	<u>3-6"</u>	<u>Over 6"</u>	<u>Total</u>
Channel Catfish			14,000			14,000

Fish Stocked for Other Nebraska Hatcheries

Northern Pike	500,000					500,000
Rainbow Trout				4,016		4,016

Fish Received from Other Nebraska Hatcheries and Stocked

Rainbow Trout				85,040		85,040
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VALENTINE FISH HATCHERY

Valentine Hatchery is located in one of Nebraska's most scenic areas on Minnechadusa Creek just northeast of Valentine. Water supplies from that Creek, Fishberry Creek, and individual spring sources on ponds at the Fort Niobrara National Refuge makes it possible to hold and rear both cold and warmwater species at this station. Stocking requests from this agency and trade agreements with other state and federal agencies determine production goals. Visitors are welcome at all times, although the aquarium units in the new building are not yet in operation.

Fish Production Results

The 1971 northern-pike operation will probably not be duplicated for years to come. Ice cover remained on Pelican Lake until April 4. At this time, ice still covered better than two-thirds of the lake. In 4 days' time, using 6 traps the first day, 10 traps the second day, and 6 traps the third day, 4,661 males and 3,572 female pike had been trapped for spawning purposes. Some 40,500,000 eggs were taken from these fish for one state hatchery, three federal hatcheries, and one private hatchery. This was highly unusual since it usually takes three to four weeks to trap this many fish. Needless to say it helped to shorten the length of time involved with the overall production.

Fry and fingerling production of largemouth bass was very good. The use of special traps made fry collections from the ponds fairly easy. Due to labor shortage, all available pond space was not used for largemouth bass fingerling production. Production in all ponds was good, with fry ponds producing excellent results.

Sacramento perch production could be classified as a complete failure, possibly due to shortage of male fish and the fact that the adults were left in the pond until it was drained.

During 1970, water loss was an important factor in the overall fish production picture. This year, water loss was negligible with the closing



of one side of the fish-hatchery-lake dam and the installation of new stop logs in the center section of the dam.

Cutrine was used here for the first time in 1971 with better than average results. Use of this chemical, two or three times during the summer months at regular intervals and just prior to draining time, should curtail heavy buildup of algae and curtail fish loss in the heavily infested ponds.

Fish Produced, Stocked, and Held for Spring Stocking

<u>Species</u>	<u>Eggs</u>	<u>1-3"</u>	<u>3-4"</u>	<u>4" and over</u>	<u>Total</u>
Largemouth Bass		90,832	24,459	3,700	118,991

Fish or Eggs Produced and Transferred to Other Nebraska Hatcheries

Northern Pike	7,560,000 to North Platte Hatchery	7,560,000
Northern Pike	180,000 to Prairie Springs Hatchery	180,000
		<u>7,740,000</u>

Fish or Eggs Produced and Transferred to Federal Hatcheries

Northern Pike	10,860,000 to Cedar Bluffs National Fish Hatchery	10,860,000
Northern Pike	17,280,000 to Gavins Point National Fish Hatchery	17,280,000
Northern Pike	<u>4,800,000 to Miles City National Fish Hatchery</u>	<u>4,800,000</u>
	32,940,000	32,940,000

Fish Received from Federal Hatcheries and Stocked

Brown Trout	61,062	10,500	71,562
Rainbow Trout	43,509	33,503	75,000
Channel Catfish	<u>60,400</u>		<u>60,400</u>
	164,971	33,503	85,500
			<u>283,974</u>

Fish Salvaged and/or Seined and Stocked

Northern Pike trapped from Pelican Lake and returned to same	8,050
Northern Pike trapped from Pelican Lake lost through handling	138
Northern Pike trapped from Pelican Lake to LaCreek National Refuge	45
Largemouth bass trapped from Clear Lake for brood stock	37
Largemouth bass trapped from Dewey Lake for State Fair	6
Sacramento Perch trapped from Clear Lake for brood stock	23
Sacramento Perch trapped from Clear Lake for research, Hastings College	6
Yellow perch trapped from Dewey Lake, stocked in Long Lake, Brown Co.	600
Yellow perch trapped from Dewey Lake, stocked in Clapper Lake, Brown Co.	<u>100</u>
	9,005

Maintenance and repair consisted of removal of dead trees on the grounds, repair of dikes, spillways and cleaning of ponds, leveling and seeding, painting and remodeling of residences and repair of trucks and equipment. Construction consisted of the building of new spillway screens, new fish tanks, motor stands, hoist frame, traps, shelves, etc.

## NORTH PLATTE FISH HATCHERY

The North Platte fish hatchery consists of 38 one-acre and one two-acre warmwater rearing ponds. Each pond has separate intake and discharge water lines. Discharge lines drain into concrete catch basins where all the fish are handled. The hatchery has an abundant water supply from Lake Maloney. An underground pipeline supplies water to each pond. The drainage system consists of an underground corrugated pipe connecting to all ponds so each can be drained individually. All eggs are hatched with re-circulated and filtered water in the hatchery building which enables good water temperature control.

### Fish Production

The hatching period begins the last week of March and ends the third week of May. During this period, someone must be on duty 24 hours every day. The striped bass program starts the last week of April and the fingerling are generally all stocked by the third week of June. At this time, one man must be on duty from 6 a.m. until midnight each day. During 1971, 54 ponds were utilized for fish production, with some ponds used twice.

<u>Species</u>	<u>Green Eggs</u>	<u>Eyed Eggs</u>	<u>Fry</u>	<u>Fingerlings</u>	<u>Pounds</u>
Northern Pike	3,451,170			928,788	1,893.0
Walleye	20,460,000	264,000	1,886,000	401,267	398.0
Smallmouth Bass			137,000	100,658	751.5
Striped Bass			420,000	104,884	721.3
Fathead minnows				14,400	
	23,911,170	264,000	2,443,000	1,349,997	3,863.8

### Maintenance and Repair

Regular maintenance work included general repair of buildings, equipment, and ponds; mowing, and cleanup. One portable fish tank was built for transportation of fish. Some new pond screens were built and others repaired. The hatch house trim and doors were painted.

## ROCK CREEK HATCHERY

Located seven miles northwest of Parks in Dundy County this unit has been in fish production approximately 46 years. Rock Creek is a combination hatchery with facilities to produce both cold and warmwater species. It is the Nebraska Game and Parks Commission's largest trout producing station.

Water is supplied to the hatchery by five springs, all located on the hatchery grounds. The flow of the springs varies from 200 gpm for the smallest spring to 1,000 gpm for the largest spring. The combined flow of the 5 springs totals 2,150 gpm. The temperature of each spring as the water reaches the surface is a constant 58° F. Each spring feeds a series of ponds. The size of the ponds vary with the flow of the spring that supplies the water. The series of ponds nearest the spring with water temperature below 68° F. are used to rear trout. The lower series of ponds with the water temperature over 68°F., during the summer months, are used to produce warmwater species of fish.

Staff at the hatchery has been reduced from six to four men. Living quarters accommodate the present staff. For the past year, maintenance and upkeep of the Benkelman substation has been Rock Creek's responsibility. This substation will probably be sold during 1972.

### Fish Production

#### Trout Production for 1971

Eggs hatched	300,000 rainbow trout
Number of trout stocked	105,178 (from 1970 hatch)
Number of trout transferred	86,730 (rainbow 1971 hatch)
	<u>3,795</u> (brown 1971 hatch)
	90,525 total pounds

Total trout stocked and transferred	195,703
Number of pounds of trout stocked	44,370
Number of pounds of trout transferred	<u>4,338</u>
	48,708 total pounds

#### Warmwater Fish Production for 1971

<u>Species</u>	<u>Number</u>
Rock bass (fry)	41,922
Rock Bass (adult)	154
Spotted Bass (fry)	10,256
Striped Bass (fry)	473
Fathead minnows -- 8.5 gallons	
Total warmwater fish	<u>52,805</u>

Some 80 female and 40 male adult rainbow trout were transferred as an egg source from the Lewellen fish trap to Rock Creek Hatchery. Two weeks after the trout were transferred, a few females developed opaque areas on their bodies and some died. The remaining trout began to show the same symptoms and started to re-absorb their eggs. The caustic agent was identified as an internal bacterial infection (*Aeromonas liquefaciens*). Remaining females were injected intraperitoneally with terramycin to arrest the disease. After two injections of terramycin a few eggs were spawned from the remaining females.

### Improvements

1. Two buildings and a walk-in cooler were dismantled at the Benkelman substation and reassembled at Rock Creek. One building was placed in an area apart from the main building and is now used for storage of oils, grease, and other flammable materials. The other building serves a dual purpose--as a storage area for fish handling equipment and to house the walk-in cooler.



A 1,000-gallon water tank was installed in the walk-in cooler to cool water used in the distribution truck tanks. The colder water on the distribution truck will increase the number of pounds of fish hauled per load, thus lowering distribution costs.

2. A water re-use system was installed at the circular pools. Water used in the circular pools is now filtered through oyster shell and rock. The water is then re-used in the ponds instead of dumping it into the creek. This will increase the flow of water into the ponds.

3. An ear-corn elevator was converted into a fish-loader, which reduces the time required to load fish and reduces part of the stress on the fish during loading.

4. Four new 5-foot circular tanks were purchased and installed in the hatch house to be used as rearing tanks for trout fry.

5. Ten additional hatching jars were acquired from the Valentine Hatchery. The entire egg-hatching-jar system was revamped to accommodate the extra jars.

#### Pond Improvements

1. More contour ditches were constructed to prevent runoff water and silt from entering ponds.

2. Two dams were built to act as silt bases to stop silt from entering ponds.

3. Ponds Nos. 5 and 15 were narrowed in width to help stabilize water temperatures and to increase the rate of water exchange per day.

4. Fifteen dump-truck loads of rock were hauled, broken, and laid to prevent pond erosion.

5. All trout ponds were flushed.

6. Silt was removed from warmwater ponds Nos. 10 and 13.

7. Twelve yards of washed rock were hauled and put in the bottom of ponds Nos. 2 and 3.

#### General Maintenance

General maintenance and repair involved: painting and repair of residences; installation of one new well and water supply; repair of fences, pond spillways, trucks, and other equipment; periodic mowing and upkeep of the area. A considerable amount of new tools and equipment was purchased during the year to replace worn out equipment.

## SALVAGE AND DISTRIBUTION

This section of the fisheries division, reduced to only nine men in January of 1971, was phased out completely on July 1, 1971. One man was transferred to fisheries management in Alliance; five men including the superintendent were transferred to the North Platte Resource Services crew, and two men resigned.

During the first 6 months of 1971, before the crew was abolished, they seined and salvaged 77,428 game and nongame fish and transferred them to other waters. In addition, 40,490 pounds of nongame fish were sold for a total of \$1,012.25, and 8,479 pounds were destroyed. Eight lakes were seined during the six-month period.

Miscellaneous work consisted of providing men to assist other divisions with work at the Lewellen fish trap, repair and construction of nets and traps, and transfer of fish for fish hatcheries.

## L A W E N F O R C E M E N T

The responsibilities of the Law Enforcement Division and its conservation officers are many and varied. Most persons are of the opinion that obtaining compliance with the laws and regulations pertaining to the management, protection, and use of wildlife summarize the duties of the Conservation Officers, however, this is only the beginning. In some aspects, "people management" has reached such proportions that in many eyes this is the primary duty. The observance and watchfulness of the conduct, safety, and welfare of human beings engaged in the taking of wildlife, or boating, or using the areas and facilities provided in the state park system are basic and are all a part of the officers daily routine. However, many of the participants of these outdoor activities need protection against themselves, and in many instances they have to be protected from those individuals who have no regard for their fellow sportsmen and citizen or the rules governing their activities. Conservation officers are also called upon by other law enforcement agencies to assist in the investigation and/or apprehension of subjects involved in various unlawful acts. In addition to the law enforcement activities, the operation of the department's two-way radio communications system and an aircraft are also functions of this division.

Additional responsibilities of the conservation officer require him to perform many duties which are of a nonenforcement nature--especially those of an educational or informational nature in which he can assist both youth and adults. During 1971, officers appeared at 403 meetings for various groups in addition to taking part in the numerous sports and travel shows, fairs, radio and television programs. Officers also make or assist in making investigations and surveys concerning populations of wildlife, the management of fish, game animals, game birds, migratory birds, other species of wildlife, the stocking or transplanting of fish and game, and pollution problems. As a part of their field activities, officers contacted and checked 22,401 hunters, 52,909 fishermen, and 300 trappers. They inspected 8,507 boats, and made 5,368 miscellaneous contacts, the majority of which were on state park areas. In all, 1,915 complaints were investigated. There was a slight decrease in the deer mortality record during 1971, with the districts reporting 1,526 deer and 6 antelope mortalities, most of which were road-killed animals.

There were 32 known or reported hunter casualties during 1971, with 7 fatal and 25 nonfatal. In 22 cases, the victim was shot by another person, the remaining 10 casualties were self-inflicted. The number and type of firearms involved included: 22 shotguns, 8 rifles, and 2 handguns.

### Ages of Persons Involved

	VICTIM	SHOOTER
Less than 15 years of age	7	4
16-21	11	4
22-26	3	2
27-31	2	8
32-36	2	0
37-41	2	1
42-46	1	0
57-61	2	0
72	1	0
Unknown	1	3

During 1971, the Law Enforcement Division had a maximum staff of 48 conservation officers including a division chief, an assistant division chief, 4 district supervisors, 1 officer-pilot, and 41 area officers.

Officers drove a total of 1,494,916 miles. Average mileage per gallon of gasoline used was 11.68 miles per gallon. The average cost per mile of vehicle operation was 6.58 cents per mile which represents all fuel, oil, grease, tires, service, repairs, and special equipment.

A total of 2,642 arrests was made during 1971 for 2,728 offenses. Of the total arrests, 2,580 were found guilty by the courts. Conviction rate for the total number of arrests and citations issued is 97.65 percent. It was 98.47 percent for those actually brought to trial. These percentages not only reflect the high efficiency on the part of the officers, but also shows the excellent cooperation of Nebraska's prosecutors and courts.

### VIOLATIONS

#### Fishing

Fishing, attempting to take or possess fish without a permit	674
Too many hooks or lines	48
Overbag limit of fish	13
Taking fish illegally	12
Failure to display fish permit	11
Nonresident in possession of a resident permit	11
Other	25
Total	794

#### Boating

Improperly equipped vessel	239
No registration and/or numbers and/or symbols	24
Towing skier without mirror or observer	19
Allowing child under 12 years of age in boat w/o life jacket	18
Other	13
Total	313



### Hunting

Loaded shotgun in or on a vehicle	306
Taking, attempting to take or possess game birds or animals in closed season	155
Hunting without permission or trespass	91
Hunting, attempting to take or possess game birds or animals without a permit	87
Failure to seal deer	59
Hunting with an artificial light	55
Hunting from a public road	41
Overbag limit of game	22
Accessory to game law violation	22
Hunting on a refuge	20
Taking protected species	14
Possession of illegal game birds or animals	11
No upland game bird stamp	9
Obtaining a permit with false information	8
Taking game from a vehicle	7
Nonresident in possession of a resident permit	7
Hunting in wrong unit	7
No sex identification on game birds or animals	6
Overbag limit of bull frogs	5
Other	<u>31</u>
Total	963

### Miscellaneous

Entering closed beach area	108
Drinking on state property	103

Littering		99
Minor in possession		97
Possession of Marijuana		39
Speeding		30
Driving or parking in restricted area		23
Swimming in unauthorized area		18
No drivers license		17
Petty Larceny		14
Disturbing the peace		12
Failure to stop at stop sign		10
Intoxication		10
Open fire in unauthorized area		10
Target shooting from a public road		9
Discharging firearm in recreation area		6
Possession of illegal fireworks		5
No license plates on mini-bike		5
Other		<u>43</u>
	Total	658
	<u>1970</u>	<u>1971</u>
Total Arrests and Summons Issued:	2,520	2,642
Not guilty	7	14
Cases dismissed	14	27
No complaint filed	7	21
Total Convictions:	2,492	2,580

	<u>1970</u>	<u>1971</u>
Total Fines	\$40,880.00	\$44,702.90
Total Costs	12,169.89	14,064.30
Total Liquidated Damages	<u>12,705.00</u>	<u>10,930.00</u>
<u>GRAND TOTAL</u>	\$65,754.89	\$69,697.20

<u>YEAR</u>	<u>TOTAL ARRESTS AND SUMMONS ISSUED</u>	<u>TOTAL CONVICTIONS</u>	<u>PERCENTAGE OF TOTAL ARRESTS</u>
1971	2,642	2,580	97.65
1970	2,520	2,492	98.89
1969	1,909	1,859	97.38
1968	1,767	1,743	98.64
1967	1,799	1,768	98.27
1966	1,971	1,930	97.91
1965	1,921	1,897	98.82
1964	1,943	1,904	97.99
1963	2,000	1,943	97.15
1962	1,393	1,379	98.99
1961	1,731	1,696	97.97
1960	1,520	1,472	96.84
1959	1,000	986	98.60
1958	801	761	95.00
1957	509	502	98.62
1956	484	474	97.93
1955	572	562	98.25
1954	477	473	99.16



# BREAKDOWN OF ARRESTS BY AGE FOR 1971

AGE	URBAN	RURAL	ONLY ADDRESS GIVEN IS NAME OF TOWN OR POSSIBLY A P.O. BOX NUMBER
Less than 12	2	---	---
12 - 15	81	15	4
16 - 19	656	144	60
20 - 23	459	77	21
24 - 27	238	46	14
28 - 31	163	27	7
32 - 35	108	14	6
36 - 39	102	22	4
40 - 45	114	27	7
46 - 50	52	22	7
51 - 55	43	6	6
56 - 60	47	4	2
61 - 65	9	4	2
66 & over	17	1	---
Unknown	2	---	---
GRAND TOTALS	2,093	409	140 = 2,642

# CHAMPION AIRCRAFT OPERATIONS REPORT

The Champion airplane was flown 391.55 hours during 1971, a decrease of 53 hours from 1970. Several flights were cancelled because of poor flying conditions, and the summer duck brood count was not flown this year.

Of 391.55 hours in the air, 343.75 hours were daytime flying, with 47.80 hours of night flying. Total expenses for operation of the airplane were \$2,124.27. A gas tax refund of \$60.97 decreased expenses to \$2,063.30, plus insurance and depreciation. Cost per hour was \$5.27.

The airplane was used for aerial surveys of big game, waterfowl, and antelope, deer depredation, grouse hunter survey on Halsey Forest, aerial photography, and fish-and-game law enforcement.

There was an increase in the number of violators apprehended through the use of the airplane in 1971. There were 21 arrests this year compared to 14 last year. Twenty of these violators were found guilty by the courts. They paid total fines of \$500 with court costs of \$99 and liquidated damages of \$650 paid. There were also three rifle-deer permits confiscated.

## AIRCRAFT RENTAL

PURPOSE OF RENTAL	DIVISION	HOURS OF FLYING TIME	COST
Law Enforcement Patrol & Orientation	2332-40	196.60	\$1,025.00
Duck Survey	W-15-R	33.55	176.81
Goose Survey			
Antelope Survey	W-15-R	80.85	426.08
Deer Survey	W-15-R	5.80	30.57
Fire Patrol			
Depredations (Deer)	W-15-R	2.80	14.76
Depredations (Antelope)	W-15-R	32.85	173.12
Transportation of Fish	F- 4-R	5.45	39.62
Halsey Grouse Hunter Survey	W-38-R	4.95	26.09
Sandhill Crane Pictures (Platte R.)	W-15-R	6.60	34.78
Federal Waterfowl Count		10.10	53.23
Pictures for fisheries	2332-59	10.40	54.81
Pictures of Omaha (I & E)	2332-23	1.60	8.43
TOTAL FLYING TIME & EXPENSE		391.55	\$2,063.30

RADIO COMMUNICATIONS  
BREAKDOWN OF OPERATION COSTS

Mobile radio contract with Midwest Communications	\$10,080.00
Radio equipment contract for Towers, Repeaters & Controls with Midwest Communications	4,209.00
Other radio equipment service & tower repairs not covered by contract	1,617.20
Upgrading present equipment on towers	754.05
Installations and removals	2,520.00
Relocating equipment from Auburn to Peru	1,730.00
	<hr/>
GRAND TOTAL	\$20,910.25



## R E S O U R C E   S E R V I C E S

Resource Services Division (previously Land Management) is responsible for development and management of certain lands within the department for game production, hunting, fishing access, and related outdoor recreation. Generally lands under the divisions's responsibility are designated "special use areas".

Management of these areas is the primary function of the division. Another important activity continues to be conservation education. Wildlife habitat and subsequently wildlife populations are affected almost entirely by private landowners in Nebraska. Education continues to be the key to enhancement or even retention of good habitat for wildlife in this state.

Other division functions include management of the elk and buffalo herds in the Wildcat Hills, the captive Canada goose flock, and breeding flock of crested tinamou at Sacramento-Wilcox Game Management Area, the Canada goose and wood duck production program at Branched Oak, the tree and shrub nursery at Cornhusker Game Management Area as well as providing assistance to private pond owners in the management of farm ponds and screening excess government property.

### Management

Improvement of wildlife habitat is one of the principal objectives of the Resource Services Division. While the main emphasis was placed on the enhancement of habitat on state management areas, restoration of wildlife habitat on private lands also received considerable effort. Improvement of wildlife cover on state lands was accomplished primarily with tree and shrub plantings and seeding of grasses and legumes. These activities were performed by division personnel and by conservation lease agreements with tenants.

For the most part, management, development, and maintenance of over 80 special use areas, ranging in size from 3 acres to approximately 10,000 acres, are accomplished with Pittman-Robertson or Dingell-Johnson funds matched with fish and game funds. Maintenance of existing public-use facilities continued to consume a great deal of time. Repairing, cleaning, and other maintenance activities are necessary to meet public need. Landscaping and location of facilities placed on state areas received considerable attention in order to present the type of atmosphere conducive to the type of outdoor recreation opportunities available.

Restoration or enhancement of wildlife habitat on private lands was accomplished by individual contact with interested landowners, farm operators, and other conservation agency personnel. These other conservation agencies included the Soil Conservation Service, the Agricultural Stabilization and Conservation Service, the Forest Service, the Bureau of Reclamation, the Corps of Engineers, the Soil and Water Conservation Commission, the Fish and Wildlife Service, and several others including public power and irrigation districts.

District supervisors served as technical advisors for the Commission in the Rural Environmental Assistance Program (REAP) offered by the U.S. Department of Agriculture. Three conservation practices in which the division became directly involved are: (1) wildlife habitat, (2) wetland development, and (3) ponds for wildlife. Much activity was devoted to servicing requests for these practices.

Specific activities normally performed on special-use areas include: (1) planting of wildlife food and cover plots, (2) planting trees, shrubs, grasses and legumes for wildlife cover and landscape purposes, (3) construction and maintenance of fences, (4) construction and maintenance of access roads, trails, parking areas, sanitary facilities and other public-use facilities, (5) disposal of trash and litter, (6) installation of signs and boundary markers, (7) control primary noxious weeds as capabilities allow and (8) wildlife-related surveys and investigations.

Most personnel, especially district supervisors and the habitat coordinator, spent a great deal of time coordinating the NEBRASKALAND Acres for Wildlife program. Cover Agents and farm or ranch operators have enrolled several thousand acres in this program. Conservation officers provided much of the actual inspection and servicing of these enrollments.

The farm pond biologist and other division personnel, primarily district supervisors, provide assistance to private landowners on pond management. Approximately 400 applications for stocking of private ponds were processed. In addition, many population checks were performed for private pond owners.

Screening of excess federal property has been handled by the division since the Commission received authorization for this procedure. Frequent screening trips have been made to military installations in the midwest. A variety of equipment has been procured for the Commission in this manner.

Certain activities in each district are given special attention in the following paragraphs because of their importance.

District I: Primary duties involved the management of the wildlife management areas located in the Pine Ridge. A large segment of time was devoted to management of the James Ranch and the phasing out process of Beef Research at Ft. Robinson. Live trapping and tagging of deer, plus additional wildlife surveys and investigations, were carried out.

Management of the elk and buffalo herds in the Wildcat Hills consisted of aging, culling, tagging, and record maintenance.

Assistance was provided to both the Aquatic and Terrestrial Wildlife divisions on a variety of activities.

Personnel also spent some time assisting with the controlled goose hunting operation at Plattsmouth Waterfowl Management Area.



District II: A large portion of the activities was devoted to management of special-use areas. Nearly all habitat development and maintenance was accomplished by the use of conservation leases with tenants.

Some 33 Canada geese were released on Ballards Marsh SUA and South Twin SUA as part of the Sandhills Canada Goose Restoration Project.

Conservation education activities in the district received considerable attention. Surveys on hunter-use were conducted on several sites outside of the district and assistance was provided to other divisions on a variety of activities. Some time was also spent in operation of the Plattsmouth WMA.

District III: Activities were centered around management and maintenance of wildlife areas during the past year. Flooding on several areas necessitated a great deal of repair to fences, roads, and public-use facilities.

Planting of trees and shrubs and seeding of grasses and legumes for wildlife habitat and landscaping purposes on wildlife areas and the District III headquarters required much planning and labor.

Conservation education continued to consume a large segment of time. Programs dealing with wildlife conservation and habitat were presented to approximately 3,000 individuals.

Assistance was provided for Plattsmouth WMA, Grove Lake Trout Rearing Station, and the Aquatic and Terrestrial Wildlife divisions in a variety of activities.

District IV: Most activities were directly involved with management of the 23 special-use areas in this district. Wildlife-habitat development was accomplished primarily by use of conservation leases.

Surveys of wildlife and hunter-use on some of these areas were conducted and some of the information gathered on the Clear Creek Area follows.

Clear Creek Area, located on the west end of Lake McConaughy, supplied approximately 7,500 man-days of waterfowl hunting, plus many other man-days of outdoor recreation devoted to other pursuits. An estimated 1,600 Canada geese were harvested in the Clear Creek vicinity during the past hunting season. Duck numbers peaked at 75,000 and the Canada goose population reached 13,000.

The captive goose flock on the Sacramento area produced 180 Canada goslings which were stocked on the Sandhills Goose Restoration sites. The crested tinamou breeding flock produced 253 young for stocking in Frontier and Chase counties.

The wildlife crew in this district participated in a variety of projects throughout the state. Included were establishment of goose browse on the Plattsmouth and Clear Creek areas, tree planting and fence maintenance in the Platte Valley and Pine Ridge, rough fish removal on state managed lakes, fish transportation and salvage, and lake surveys.



District V: Primary activities centered around the management of Plattsmouth WMA. The controlled goose-hunting operation not only required full-time attention of resident personnel, it also required assistance from other division and Commission personnel. Snow and blue goose numbers peaked in excess of 100,000 and 1,747 individual goose hunters had the opportunity to take part in the controlled hunt.

Iron Horse Trail SUA boundary locating and fencing required much planning and labor.

Remaining activities consisted of management and maintenance functions on other lands under division control.

Platte Valley: Maintenance and management of the wildlife areas was the main function of personnel. Implementation of a crew reorganization facilitated these activities.

Tree and shrub planting for wildlife habitat and landscape purposes was carried out on several areas. Sign construction and placement and repair of dikes and roads also received much attention.

The tree and shrub nursery continued to be a principal activity. Approximately 5,500 plants were taken from the nursery and planted on park areas, fish hatcheries and special-use areas.

Salt Valley Lakes: Seeding of grasses, legumes, tree and shrub plantings, and noxious vegetation control were the main activities. Much habitat improvement was accomplished by the use of conservation leases.

Planting of food plots where food was a limiting factor required considerable time and effort.

Production of wood ducks was not exceptionally good and procedures have been undertaken to improve the program. Production of Canada geese was rated good considering the small number of mated, mature geese.

Dog trial and training activities are administered by the division. Three training areas and one trial area are maintained on state property. Thirteen licensed trials, one national trial, and several club and A.K.C. sanctioned trials were conducted on the Branched Oak Lake Dog Trial Area.

## I N F O R M A T I O N   A N D   E D U C A T I O N

During 1971, the division underwent a major shift in responsibility, with the transfer of the tourism function to the State Department of Economic Development on July 1. This enabled the division to concentrate some resources on an accelerated program of conservation education. The transfer also marked the return of the division to its former name of Information and Education.

Major objectives of I & E are to inform and educate the public on the value of wildlife, wildlife habitat, sound management, and environmental awareness. To accomplish these goals, the division writes, illustrates, publishes, and distributes a variety of publications and other materials. In addition, extensive work is done with such media as radio, television, personal-appearance programs, and exhibits.

Although there is considerable overlapping of activities and combining of personnel, I & E operates through seven sections--Art and Illustration, Education, Magazine, Mailing, Photography, Printing, and Special Publications. Each of these sections carries out specific functions, in addition to supporting primary division duties.

One of the newly-formed Education Section's first duties was coordination of the Commission's participation in the State Fair. The section is also responsible for development of a statewide hunter-safety program, preparation of additional educational materials for teachers and youth leaders, promotion of Acres for Wildlife, development of audio-visual materials and expanding the Commission's exposure in the broadcast media, especially television.

As in the past, all media were employed to disseminate information, including newspapers, radio, television, outdoor writers, magazines, films, house organs, group and business publications, Commission publications, and others.

Carrying on an intensive news program is an important function of the division. Included in the Commission's news program were the weekly news/feature packet, special news releases, radio and television programming, special stories prepared on request from the media, twice-weekly releases on field conditions for hunters and fishermen, plus twice-weekly radio reports via a three-minute telephone answering service for exclusive use by radio stations, and slides and scripts for television stations for such occasions as season openings.

"NEBRASKALAND NOTES", the weekly news packet, was sent to more than 1,000 newspapers, wire services, radio and television stations, outdoor writers, house organs, magazines, and Commission personnel. It carries features and news stories on hunting, fishing, conservation subjects, regulations, Commission projects, and other pertinent matters. Late-breaking news items and subjects with an important time element, such as hunting and fishing reports, are handled in the special news releases, which go to the local media, plus other daily newspapers in the state, radio, and television via the wire services. During 1971, some 148 "specials" were distributed.



A campaign to attract nonresident hunters included paid ads in Field and Stream and Outdoor Life, as well as several outdoor magazines with regional appeal. Limited amounts of newspaper space and radio/TV time were also purchased.

For the first time, nonresidents were charged 50 cents for the hunt-information packet. In 1970, when information was free, some 51,000 nonresidents responded, but during 1971, only 4,130 nonresident hunters requested the packet. Because early requests for the hunt packet were low, due to the 50-cent fee, a special effort was aimed at Denver and Kansas City, both centers of interest in Nebraska hunting. Information was distributed to sportsmen and permits sold at mobile exhibits set up at shopping centers in both cities.

Totally, efforts directed toward the nonresident helped bring in approximately \$549,000 in permit revenue.

Another information and promotion effort during 1971 came from sports shows manned by I & E personnel and other divisions. In addition, displays were featured at the State Fair and several Nebraska communities. These activities are designed to provide first-hand information to the public on Nebraska's outdoor resources. Six sports shows were attended in 1971, compared to 16 such shows during 1970. The 1971 appearances included Chicago, Denver, Minneapolis, Kansas City, Omaha, and Wichita.

Personnel from I & E appeared on interview shows on several television and radio stations and arranged additional appearances for experts from other divisions. Staffers presented approximately 75 programs to youth, civic, church, and sportmen's organizations. These activities are vital public contacts for the Commission, since they provide an important means of conveying information.

Among films available to the public for free showings, "NEBRASKALand, Where the West Begins" was again the most popular, with 75 bookings. In all, various organizations scheduled films for 483 showings. During 1971, 12 films were retired as obsolete or too worn for further service. These included: "Know Your Ducks" (1 print), "Troubled Waters" (1 print), "NEBRASKALand Days" (8 prints), and "NEBRASKALand, Where the West Begins" (2 prints). One new film, "The Prairie Killers", was added to the film library, as were three replacement copies of "NEBRASKALand, Where the West Begins". In addition, many other films were previewed for possible addition to the Commission's film catalog.

The Commission's 15-minute weekly radio show, "Outdoor Nebraska", was broadcast over 36 Nebraska stations and 4 in neighboring states. The show regularly features specialists from the Commission and outside sources, speaking on a variety of outdoor subjects.

NEBRASKALand Magazine, the official publication of the Game and Parks Commission, published 816 pages in its 12 issues during 1971. Of these 816 pages, 415 featured color illustrations. The 61,928 subscriptions brought in \$162,302.07 during 1971. NEBRASKALand had subscribers in all 50 states and 45 foreign countries, as well as newstand distribution in 19 states. Advertising revenue was \$39,824.64. Combined income from subscriptions, advertising, and newstand sales was \$212,359.76.



Other revenues generated by the division during 1971 included more than \$24,000 from the sale of the NEBRASKAland Calendar of Color, \$5,243 from the rental of mailing lists, and \$1,068 from the sale of binders for NEBRASKAland Magazine.

To illustrate the magazine and other publications, the Photography Section made 4,169 black-and-white and 23,264 color exposures during 1971. These were also provided to state, national, and international agencies on a no-charge basis. Included were newspapers, medical journals, telephone companies, church publications, chambers of commerce, school yearbooks, encyclopedias, publishing firms, magazines, airlines, travel organizations, outdoor organizations, and others. Color slides, copies of photos that appeared in NEBRASKAland, were sold to individuals, educators, schools, and others. The division's 3 photographers traveled some 62,767 miles and spent 325 man-days in the field during the year. In all, the section produced 8,247 black-and-white prints for various uses.

The Art Section provides illustration for a wide range of purposes, with about 60 percent of its time devoted to artwork and layout for NEBRASKAland Magazine. This includes about three major pieces of art per month, plus several smaller illustrations, as well as supervising the complete format of the magazine through all stages of production. The section is also responsible for design of all other Commission brochures and pamphlets, including the Calendar of Color, promotional posters, and illustrations for slide shows and television productions. The staff paints some 200 showcards and signs for use at the State Fair and other events requiring display materials. The artists also designed and installed displays at the State Capitol. Two displays for sports shows were created and painted by the section, as were two floats for the NEBRASKAland Days parade.

During the year, the Special Publications Section wrote, edited, and supervised production of a variety of pamphlets and brochures for other divisions and I & E use, as well as handling the dissemination of news for the department. Some of these publications are done annually, such as the hunting, boating, and fishing guides. Others are revised, updated, and reprinted as needed, and still others are one-time publications, such as "WHERE THE FISH ARE", a full-color brochure on where, when, and how to catch fish in Nebraska.

Other publications prepared by Special Publications during 1971 included: Plattsmouth Waterfowl Management Area brochure and other materials related to hunting there; Duck Identification Guide for Hunters; Field Care for Big Game; Outdoor Fun in the Salt Valley; Time Out For Carp; several publications in support of Acres for Wildlife; NEBRASKAland Camping Guide; parks regulations; a 68-page program and other materials for the Midwest Fish and Wildlife Conference, as well as other miscellaneous pamphlets. Another major effort involves the publication of the 260-page book on Nebraska's game laws. A compilation of hunting, fishing, trapping, boating and other statutes dealing with Commission responsibilities, the Game Laws are utilized by conservation officers, county attorneys, judges, and other law enforcement agencies.

During 1971, the Commission initiated the publication of "Staff Affairs", a newsletter designed to keep employees up to date on the department's policies and activities. Issued after each Commission meeting, production of Staff Affairs is also the responsibility of the Special Publications Section. The

newsletter not only outlines Commission attitudes and policies, it discusses all programs of interest to personnel that are related to Commission procedures and objectives.

The Printing Section handles the printing of all Commission materials that are not done commercially, plus running labels for NEBRASKALand Magazine. During 1971, the section ran 1,131 jobs on the two offset presses. This work involved use of 3,951 masters and required approximately 2,725,000 sheets of paper.

With the move of Lincoln-based personnel into the new headquarters complex, all mailing responsibilities were transferred to the I & E Division. This necessitated the creation of a new Mailing Section, composed of employees moved from other duties within the division. Only one mail clerk remained with the division after the transfer of tourism to the Department of Economic Development. The new section handles all department mail, both incoming and outgoing. Previously, when the division was located at the Wildlife Building on the State Fairgrounds, department mail was processed at the central office at the State Capitol, with division personnel handling only I & E and District V mailings. This was done as part of the then Printing and Distribution Section. Postage for all mail handled in 1971 amounted to \$51,104.69.

Until July 1, the division carried on promotion of Nebraska's scenic, historic, and recreational potential through distribution of informative literature and other endeavors. After the transfer of tourism the Game and Parks Commission and specifically I & E retained an interest in travel promotion only through NEBRASKALand Magazine. This involved an agreement in which Economic Development subsidized a portion of the magazine's printing and mailing costs in exchange for tourism-related articles appearing in NEBRASKALand.

A highlight of the division's efforts during the year was winning second place for overall excellence in its total information program for 1970. The international competition is conducted by the American Association for Conservation Information. Category awards won by the division included: first in still photography, second in news releases, second in special promotion (Fishing, A Family Affair), and third for regular radio programs. AACI is an organization of the information and education personnel of state and federal conservation agencies throughout the United States and Canada.



## I N - S E R V I C E T R A I N I N G

Increased effectiveness in "getting the job done" is the overall goal of In-Service Training. The training program was begun in July and initial efforts involved the formulation of guidelines for its scope and operation within the overall goal. These guidelines were based on interviews with adult education specialists as well as those who were conducting effective training programs.

Based on the interviews it was decided that the training program would encompass two areas--communications and training sessions.

In the area of communications, information of interest is to be provided to employees. Included is data pertaining to agency structure, personnel, decision-making processes, budgeting, etc. The goal in this area of in-service training is to increase each employee's attitude and will to work through a better understanding of the total agency.

The training sessions, which make up the second area of in-service training, will be designed to update knowledge and to increase technical skills. These sessions will be arranged and conducted for individuals as well as for groups of employees.

At the time the scope of the training program was introduced to employees, they were asked to participate in initiating the program by their suggestions and answers to a training needs questionnaire. Based on 135 employees who responded to the questionnaire the 5 most commonly expressed training needs relate to: (1) agency policies, (2) effective speaking and writing, (3) budgeting procedures and priorities, (4) responsibilities of organizational units, and (5) biological topics.

These training needs were pooled with those recognized by supervisors as a basis for establishing training priorities. Some priorities have now been established and training programs are being planned by training committees which include the training officer, prospective trainees, and appropriate supervisors.

These programs will cover the area of, (1) agency policy and objectives, (2) management development, and (3) conservation officer training.



## B U R E A U O F S T A T E P A R K S

The Bureau of State Parks is charged by law with the administration and management of the Nebraska state park system. These areas are administered according to the following statutory classifications:

STATE PARKS are resource based recreational areas of substantial size, having scenic, scientific, and historical values and complete development potentials. At present, Nebraska has four such areas in operation: Chadron, Fort Robinson, Ponca, and Niobrara. One offers a restaurant and hotel rooms. Two have group camps. Three have swimming pools. All offer modern housekeeping cabins and overnight camping facilities.

Acquisition is nearing completion for a fifth such area, Indian Cave State Park, to meet some of the urgent need for complete state park facilities in heavily populated southeast section of the state. Now open for day-use and primitive camping, there is a resident superintendent at the park proper.

STATE RECREATION AREAS have primarily day-use potentials, with overnight camping also an important consideration. Such areas are also resource based and are located in accordance with sound park management principles.

STATE HISTORICAL PARKS are sites of notable historical significance and of sufficient size to permit the interpretive potential of the site to be fully developed. Limited day-use facilities are not allowed to detract from or interfere with the primary purpose of the area.

STATE WAYSIDE AREAS are located along main traveled highways, at points of scenic and historical interest where possible. They are developed to afford the traveler a safe place to stop, to rest, and to picnic, with overnight camping of a limited nature.

Total visitation for all areas in 1971 was estimated at 6 million persons. The following is a resume of 1971 activities by principal areas:

### STATE PARKS

CHADRON (9 miles south of Chadron): Income and visitation at the park remained at approximately the same level as the previous year. The area continues to be popular and offers a beautiful setting for outdoor recreation.

Negotiations continued for acquisition of land on which to construct a new camp area serving the park. The second half of the scenic drive was re-graveled and two scenic overlooks were constructed. Two 20-foot auto gates

were installed on each end of the drive. The old swimming pool was filled and the area surrounding it landscaped and seeded to grass, thus improving the public area in the immediate vicinity of the Administration building. An historical marker was obtained from the Nebraska Historical Society honoring Chadron State Park as the oldest park in the state of Nebraska, also honoring its founders and the area it is situated in.

FORT ROBINSON (3 miles west of Crawford): The area opened for spring turkey season and closed at the conclusion of the fall big-game and turkey seasons. Ever popular, this major park offers lodge and cabin facilities, camp and day-use areas and a restaurant. Activities of interest are available for all ages at Fort Robinson, which again enjoyed a busy year with an increase in income and visitation.

The shower house in the camp area was refurbished and opened to public use in the early spring. Repainting and renovating commenced on one of the large brick overnight units. This facility will increase the overnight visitor capacity by approximately 30.

In the spring, 500 cottonwood trees from 6 to 8 feet tall, were planted with an estimated 90 percent success ratio. The tree-planting program will be continued.

INDIAN CAVE (5 miles east of Highway 67 on Nemaha-Richardson County line): Approximately 200 acres of land were acquired and added to the park. A group of Neighborhood Youth Corps boys from the local area constructed two miles of new boundary fence, along with removing old fence. A group of county Green Thumb workers removed old fence and cleared areas for picnicking and camping.

Park visitation continued to increase. In the fall, construction was begun on the park superintendent's residence, with completion scheduled for March, 1972. Additional acquisition is scheduled for 1972-73.

NIORARA ( $\frac{1}{2}$  mile south, 1 mile west of Niobrara): Income and visitation was up slightly over 1970. Spring flooding necessitated 175 loads of fill and gravel to repair damaged park roads.

Some 110 loads of fill were hauled to make a high-and-dry location for a 12 foot by 24 foot storage building, which also serves as a small shop when the present shop building is unusable because of water. The high water table and some Dutch Elm disease necessitated the removal of 380 trees. Some 200 cottonwood trees were planted to replace those removed. A large picnic shelter 24 feet x 48 feet with a cement floor was built. Two small shelters 10 feet x 16 feet were built from old buildings. The roofs on two existing shelters were replaced.

PONCA (2 miles north of Ponca): Ponca State Park was a popular place during the 1971 season. Nearly every state was represented, including visitors from Canada.

The newly constructed camping area opened just before the Fourth of July and accommodates approximately 165 units. The area offers all-weather, surfaced pads with electrical hook-ups, plus two modern shower-latrine buildings with hot and cold water. A trailer dump station is available. Access roads are hard surfaced and each pad is designated.



A 1½ mile scenic road was hard surfaced in the Riffe tract of the park and opened to visitation. A new asphalt access was constructed at the river front, with visitor parking and area lighting. Work continued on the removal of trees affected with the Dutch Elm disease.

#### STATE HISTORICAL PARKS

ARBOR LODGE (Nebraska City): On April 22, Arbor Day, a Concolor fir tree was planted in memory of the late Carol Gunlach. Miss Gunlach was a guide-hostess at Arbor Lodge for 25 years. Arbor Day was observed in Nebraska City on May 1 and 2. Ira Glasser, superintendent of Arbor Lodge, was the honoree. Governor J. James Exon gave the Arbor Day message.

The following donations were received: Furniture, china, etc., valued at \$1,100 from the Elma Wright estate and Thomas A. Edison artifacts valued at \$3,200 from the Brook Foundation.

Improvements included new rug for the reception room and stairs, repainting of the mansion commenced, repair of fences, painting of all posts, installation of new guard posts, reconditioning of windows in mansion and carriage house, replacement of the ceiling in Mr. Morton's bedroom with sheet-rock, four rooms in the mansion repapered, furniture repairs, a new water heater installed in the basement, and furnace repair including a new water pump.

During the year, 38,000 people visited the mansion, representing all states and 24 countries.

ASH HOLLOW (3 miles southeast of Lewellen on U.S. 26): The small visitors center at the park headquarters was operated during the three summer months. Visitation was similar to last year. Since the maintenance crew was cut by half, only basic maintenance was performed and no repairs or new projects were undertaken.

No capital construction projects were completed during the year, but several projects, including the development of Windlass Hill, the reconstruction of the rock school, the development of Ash Hollow Cave and construction of a maintenance building were in the planning stage at the end of the year.

BUFFALO BILL RANCH (North Platte): Attendance was up 11,871 over 1970, which was probably due to the Wild West Show staged at the new Wild West Arena erected just south of the ranch. The "Buffalo Bill Wild West Show" opened on July 21, with many dignitaries in attendance. At the close of the premier performance, a feed was held at the ranch along Scout Creek for some 200 to 250 guests. It was sponsored by Monte Montana, Jr., producer of the Wild West Show.

Artifacts obtained during the year included a pillow case embroidered by Annie Oakley, a carved steer horn done by a Chinese cook in the Buffalo Bill show, an odometer (all loaded by Mrs. Russell Langford), and a Cossack uniform and chamayo rug that belonged to Johnny Baker from his niece, Mrs. A. W. Stainback. A Buffalo Bill "Scout" B-B gun, a gift from Daisy-Heddon, will be displayed in the barn.

The District IV crew and area help removed 18 dead trees from the mansion grounds and the smoking area. Additional tree work must still be done as manpower becomes available, and an extensive tree-planting project is planned for the coming season. A sprinkler system was installed during the summer.

Information on the ranch was disseminated through 10 television shows on KNOP and KOLN/KGIN, with a total of 45 minutes air time. Nationally, Scout's Rest was featured in one of the "Famous American Homes" series of TV commercials for Sears paint. Aired in prime time, the 13 spots resulted in 280 million exposures for the ranch in the U.S. and Canada. In addition, a series of 52, 10-minute radio programs were given on the "Tales of Buffalo Bill". Three other 10-minute programs were taped for the Billie Oakley Show, which is syndicated to 39 radio stations. Some 17 personal-appearance programs were presented for various groups, with a total attendance of 1,219 persons. Some 4,000 full-color brochures on the ranch were received free from Sears and Roebuck, which also sent the positives to be used for printing additional copies if needed.

Some 2,746 people viewed the ranch as part of 81 pre-arranged tours, including 3 convention groups--the Nebraska Hereford Association, the Nebraska Irrigation Association, and the National Blue Flame Corporation. The park again played host to Buffalo Bill Cody Award winner (Slim Pickins), and the National Muzzle-Loader Shoot was held here. A barbecue was held at the ranch for the Rotary Foreign Exchange students, with about 200 attending. Cody Scout award plaques were presented to Dr. Robert Manley and Monte Montana, Jr.

Personnel also participated on a committee for a commemorative postage stamp to honor Buffalo Bill.

FORT ATKINSON (1 mile east of Fort Calhoun): Archeological exploration continued to dominate activities at Fort Atkinson. During 1971, the outline of the northwest bastion was uncovered as well as the location of the north, west, and south gates. Several building indications were unearthed outside the west wall.

The northwest bastion was restored by park personnel. Great attention was given to restoring this angular defense work to its original location and height.

Plans are now being formulated for the construction of a new park entrance, parking area, and the restoration of a 20-foot by 60-foot barrack's section. Work has already started on the renovation of an existing building into a maintenance shop and on the development of a temporary museum.

FORT HARTSUFF (3½ miles northwest of Elyria): Development at Fort Hartsuff consisted of installation of heating units and underground propane tanks in the Hospital, Company Officer's Quarters, and Adjutant Office Buildings.

The superintendent moved into the new residence in February, 1972. Visitation to this historic area continues to increase as restoration activities proceed.



FORT KEARNY (6 miles east, 2 miles south of Kearney on Nebraska 10): Visitation for 1971 at Fort Kearny continued to be high.

Dead limbs were removed by contract from the old cottonwood trees in an attempt to save the trees planted in 1848 by soldiers at Fort Kearny.

Routine maintenance was performed on the grounds and the removal of dead elm trees continued. Some 200 new trees were planted.

Ten-foot sidewalks were constructed around the parade grounds. Aggregate rock was worked into the top of the concrete so the walks would resemble the old gravel walkways. Bulletin boards are being constructed to mark and illustrate the old buildings of the 1864 period.

A concrete drive was completed to the assistant's residence, and a concrete maintenance yard was constructed. A new underground sprinkler system was completed and put to use.

Fort Kearny personnel also manage and provide general maintenance for nearby Kearney State Recreation Area. This heavily used area had as many as 300 camping units per night.

#### MANNED STATE RECREATION AREAS

FREMONT LAKES (3 miles west of Fremont): Fremont Lakes State Recreation Area received very heavy use during 1971. The main camping area was closed for construction until July 3.

Activities include swimming, boating, fishing, hunting, camping, hiking, picnicking, and ice skating. Fremont Lakes ranks near or at the top in total individual visitations due to the varied activities and location near Omaha and Lincoln. Stocking of carp was discontinued.

Although there were no swimming fatalities this year and no other major accidents reported during 1971, vandalism is still a major problem at the area. Campers were disturbed and facilities were damaged, trees run over, garbage cans and tables were ruined or thrown into the lakes, signs stolen or torn off, posts broken off or ruined, camping supplies and equipment stolen, tents stolen, tents and ropes cut.

Major improvements completed or started and due for completion by the start of the 1972 camping season include: removal and relocation of the old yard-shop building to the east end of the area, where it was placed on a block foundation. The building is used for storage in the winter and as an alternate operation facility for routine maintenance. A new loading dock was completed. A new 30-foot by 50-foot steel insulated maintenance building was built in the yard.

In the main camp area, a new shower-latrine building was built with cased well and pressure system, water lines, sewer system, hydrants and faucets, trailer-dumping station, area lighting, electric outlets, landscaping, roads and camping pads all due for completion in the Spring.

Construction of a new blacktop road commenced. The road will follow a course from the blacktop east between Lakes 9 and 10 to the east end of the area, around Lake 13 to connect with the end of the present blacktop by Victory Concession. Completion is scheduled for Spring of 1972. Under recreation access road funds, West Military Avenue was paved--west 1½ miles to the big grain elevator where it intersects with the existing area blacktop. North of the railroad tracks, construction was begun on two new latrine buildings, a cased well and pressure system, water lines, hydrants, faucets, electric lighting, roads and camping pads for completion during 1972. Air pumps and hoses were used on lakes Nos. 2, 4, 12 and 13 during the winter.

The area superintendent worked at the Des Moines sports show and at the Commission's information booth during the State Fair. Other responsibilities of the Fremont area crew involved overseeing and maintenance of Dead Timber State Recreation Area.

DEAD TIMBER (4 miles north, 1½ miles west of Scribner): Visitation at Dead Timber State Recreation Area dropped during 1971 due to flooding caused by water backed up by ice jams along the Elkhorn River. The area sustained heavy damage, including washed out roads. Extensive cleanup and repair operations were required. Also, new construction of the interior road system caused some temporary closures of portions of the area. Sherman Lindgren was under contract again this year to maintain the area. Considerable improvements were made throughout the summer and fall, including 18 new picnic tables; 3 concrete vaults, men and women combination latrines; 2 metal shelterhouses with cement floors; 2 cased wells with fountain-type pumps; new camping pads, and gravel added to all pads and roads. A new culvert was added at the spillway to help direct drainage of the area during flooding. The Lincoln Maintenance crew assisted with the cutting of dead trees and firewood.

JOHNSON LAKE (7 miles south of Lexington): Johnson Lake is a high-use recreation area, accommodating over 500 camping units on busy weekends.

Posts were installed at various locations to regulate traffic and use patterns at the area. Gates were installed at north and south entrances to lake front for control purposes. Pine, spruce, shrubs, and flowers were planted. A new maintenance-shop building was acquired in June and installed on the site in the fall. The drain field serving the shower building was renovated and expanded.

LAKE MCCONAUGHY/LAKE OGALLALA (9 miles northeast of Ogallala): The early months of the year found most of the manpower being utilized in the initial development of additional campground facilities on the west bank of Lake Ogallala in a 12-acre area of mature cottonwood, willow, and Russian olive trees. Additional time and funds were required during the spring for re-landscaping work in Martin Bay campground and other public areas on the northeast corner of the reservoir.

Many cubic yards of sugar sand were blown off the beaches onto adjoining grassed areas during the dry, windy winter months. Numerous truck loads of



sand were hauled off of the oiled parking lots and roads. All grassed areas were re-seeded with small-grain in an attempt to stabilize the top soils as quickly as possible. During the fall, 800 feet of snow fence were installed between the sandy beaches and the main use areas in an attempt to keep the sand from drifting onto the parking lots and roads. Two miles of sand beach and other barren areas within the complex were seeded with winter wheat in an attempt to stabilize the drifting sand.

Landscaping continued along the main interior road of the Martin Bay complex, with the planting of 250 red cedar trees from the Commissions's nursery at Dannebrog. They were approximately 20 to 30 inches tall and some of the best stock ever planted on the area.

The swimming area at Martin Bay was revamped during the early summer months. The entrance road was relocated and resurfaced by the Department of Roads. Two prefab sanitary stations, along with one change-house, were installed on the shoreline adjacent to the swimming beach.

Several factors, mainly over-use necessitated remodeling the leach fields on all three bathrooms in Martin Bay during the late summer months. This included re-enforcing the sidewalls of the septic tanks and expanding the fields.

Abnormal rains during the early summer months of 1971 aggravated the overall poor condition of the interior roads within the areas. Consequently, some 900 cubic yards of clay base were hauled for repair and resurfacing a few of the interior roads.

May saw the completion of a 15-foot by 20-foot reception room at the headquarters building. This addition proved very valuable in giving personnel a place to conduct business associated with the recreational complex and to meet the visiting public.

Numerous pit-type refuse disposal sites were covered and the areas landscaped and seeded during the summer and fall months of 1971. This action was taken to comply with regulations set up by the Environmental Protection Agency.

Some 85 percent of the private cabin lots, platted on the reservoir, are now under lease, an increase of 21 percent from last season. Of the nine lots remaining for lease, five are located on very rugged terrain.

Visitation for 1971 continued upward. The area has become a very popular recreation site for Nebraskans as well as Coloradoans.

LAKE MINATARE (4 miles east, 4 miles north, 4 miles east of Scottsbluff): Appearance of the area has greatly improved. In addition to maintenance and repair activities, 3.4 miles of road was rebuilt and 2,830 yards of gravel were hauled and spread. This reservoir remains a very popular recreation area. Its beauty is particularly significant with the large amount of tree cover and sandy beaches.



LEWIS AND CLARK (15 miles north of Crofton): Heavy visitation was recorded during 1971 with the largest use at the Weigand Area.

Trees and shrubs transplanted in the fall of 1970 appear to have approximately an 80 percent survival rate. Dead trees have been removed from the camping shelterbelts as well as other trees that were creating problems in various areas.

New concrete was poured at the Santee boat ramp to repair that facility. When the State Roads Department put in the blacktop road from Nebraska Highway 12 to the east edge of the Santee area, they also blacktopped the short road leading down to the boat ramp. This all-weather access is a big improvement and should help eliminate the erosion problem at the ramp area.

During the summer, the Corps of Engineers dredged and deepened the entrances to and just beyond the boat ramp at the South Shore area, to Weigand Marina and to Weigand Creek, the entrance to and part of the bay at the Miller Creek area and the Santee boat basin including a channel out into the lake. All of these areas had problems during periods of low-water levels, and dredging action greatly improved the situation.

The shore line at the Weigand swimming beach was stabilized with assistance from the Corps of Engineers who furnished men, equipment, and materials to finish the project.

Development at the West Weigand area commenced. When this project is completed, it will provide 100 camping pads with allied facilities as well as a swimming beach. With the increase in visitation, this type of a development is much in demand.

The year was marred by one drowning tragedy which occurred over the Memorial Day weekend. Members of a group who were camped at the Bloomfield area had gone out into the lake fishing and two members of the fishing group drowned.

LOUISVILLE ( $\frac{1}{2}$  mile northwest of Louisville): This area receives very heavy use from Omaha and Lincoln. In addition to routine heavy cleaning and repair, dead trees were cut, stumps removed and roads shoulders repaired and reseeded. Gates were installed at the entrance for visitor control and to help prevent vandalism.

During 1971, plans were completed for installation of a modern sewer line, lift station, and 3 modern restrooms. This development along with a new maintenance shop building and site and road renovation will be instituted during 1972. Royal Snider, area manager, transferred to the Lincoln (District V) crew and Randy Elmshaeuser from Lake McConaughy operations was appointed to the area maintenance position.

SHERMAN RESERVOIR (4 miles east, 1 mile north of Loup City): General maintenance was the main course of the season. Due to low water levels, the reservoir boat ramps were unserviceable for a short period in late summer.

The water release was the largest draw-down that the Farwell Irrigation District has had to take from the reservoir.

STOLLEY (Grand Island): Over 200 diseased and dead trees were removed, over 300 tons of old concrete was dug out and hauled away, with most going to Sherman Reservoir for rip-rap use. Hauling was done by John Phifer and Francis Neville. All of the buildings were painted and repaired. Over one mile of old ditches were filled, a deer herd was cared for and exhibited to the public. Camping was discontinued at the season's start. Parking lots have been laid out and defined by use of guard poles. An unsightly area in the northwest part of the park was cleaned, regraded and prepared for seeding. Old restrooms were removed.

TWO RIVERS (1 mile south, 1 mile west Venice): What started out during January as a normal, routine operation, turned into a real crisis in February and early March. Platte River flooding from river ice break up was far from normal. It breached area levees and roads, causing damage that necessitated extensive repairs. Excellent cooperation and some long work hours from the Lincoln supervisory and maintenance personnel averted more extensive damage.

The entire area was inundated, including all of the area fishing lakes. The trout lake was covered by approximately eight feet of water. Complete renovation of all area lakes is planned for spring of 1972. Opening of the area was delayed for several weeks while repairs were made and the area was allowed to "dry out". During this period, a new central dumping station for trailers was constructed. Extensive use of this new facility was self-evident during the summer and fall months that followed. It served to greatly relieve sewage intake on the overloaded trailer area septic system.

The delay in opening the area to camping and trailers caused overall a drop in patronage in this category from past seasons. Observation indicated that these regular customers were making use of Louisville, Memphis and Fremont recreation facilities.

Again during the early spring and summer months, as many trees as possible were planted and relocated from the area nursery to the main park area. Although limited in manpower and time, 175 sycamore and green ash trees in the 12 to 15-foot class were transplanted. Most of these trees were planted in the alfalfa field directly west of the office, which is intended to be converted to a public use area in the future.

Picnicking at the area was about average all season long. The usual number of large groups, such as labor, church, school and fraternal organizations, made frequent use of the area.

Trout fishing dropped off because of the late date of opening and again because of oxygen problems at the lake late in the season. For the length of time in operation, more trout tags were sold in comparison with the previous season.



Waterfowl hunting pressure was very heavy, with seven blinds available on a daily rental basis. The river was quite treacherous because of high water and scarcity of available sand bars. Hunting success was average or better.

A record number of archery-deer hunters used the area in 1971, as did a larger than usual number of small-game hunters. Game cover was good and considerable small game and game birds were taken.

VICTORIA SPRINGS (7 miles east of Anselmo): Visitations were down slightly from last season. Improvements to the area included dead tree removal, planting of 200 new trees, new roofs on the shop building and superintendent's residence, restocking of fish in the lakes and general maintenance of the office, cabins, boats, and grounds.

Personnel from Victoria Springs also have the responsibility for the maintenance of Arnold State Recreation Area and Pressey Special Use Area.

WILDCAT HILLS (10 miles south of Gering): No new capital development was undertaken, but extensive work on nature trail development continued. One additional foot bridge was installed. Some 1,850 yards of fill was hauled for roads. Care continued for the buffalo and elk, including hauling hay from the James Ranch. In addition, the crew also maintained the Bridgeport State Recreation Area, Lodgepole Wayside Area, and assisted with Lake Minatare. Bridgeport required considerable work this year due to flooding, and the staff also assisted the National Guard on flood duty in June.

SOUTHWEST RESERVOIRS: Areas involved are Enders Reservoir near Enders; Medicine Creek, north of Cambridge; Red Willow, north of McCook, and Swanson west of Trenton.

New facilities were opened to the public this year, including a campground, bathhouse, latrines, and shelter houses. New maintenance shops were put in use on all reservoirs. A new recreation access road was completed to the private cabin area at Enders.

Camping increased this year, and a trend is in evidence that the touring public is again taking a more leisurely pace through the state.

Heavy winds destroyed one changehouse and damaged the shower building at Swanson Lake.

One of the outstanding events for the season was the annual sailboat regatta at Red Willow Reservoir on July 4. Some 6,300 people viewed the 38 registered sailboats.

The reservoir crew cooperated with the U.S. Bureau of Reclamation in the weed control program, preparation of a site for the moving of a pioneer cemetery, a report on points of interest on the reservoirs, and meetings concerning future programs.



Maintenance work was carried out at the Rock Creek and Champion Recreation areas. A new mercury vapor light was installed at the Champion Recreation Area in cooperation with the Champion Junior Women's Club.

SALT VALLEY RESERVOIRS (Lancaster County): Dead trees and stumps were removed from these areas. The heavy-use pattern continued to increase. The Corps of Engineers dropped the water level at Wagon Train, Bluestem, and Pawnee to repair and rip rap the dam structures. The main road around Branched Oak along with 1.5 miles within the area was blacktopped this year. At Branched Oak, 74 waisthigh fireplaces, 242 picnic tables, 360 trash cans, 41 aluminum shelters and 6 changehouses were installed.

MORMON ISLAND (I-80, Grand Island Interchange): The area is open year-round. Work was started in March on the installation of electricity in the camping area. Each site has an electrical hookup.

Sand was hauled from east of the tracks to build a beach at the northeast corner of the lake. Approximately 1,000 feet long, it extends into the lake on a gradual slope for about 90 feet. Another small lake was created east of the tracks, as sand was hauled for the swimming beach. A bouy line was made from short pieces of post, painted orange and white, stapled to polyethylene rope.

Approximately 165 trees and shrubs were planted. They were obtained from Cornhusker Nursery. A large canna bed was planted, with a border of marigolds. Cannas were also planted at Cheyenne State Wayside Area. A walk through gate was installed across the railroad, and the east lake was opened for fishing.

Parking was a big problem this year. At times, it was necessary to close the park until space was available. The camping area was full almost every night from June 11 until August 29, and many campers were directed to Windmill State Wayside Area or other nearby private areas.

Some 1,600 channel catfish, 4 to 12 inches long were stocked in the area lakes on September 15. The beach was also closed on that date and the changehouses were drained and closed for the season.

A check station for the archery and rifle deer seasons was operated at the area, with 144 deer checked during rifle hunt and 14 during archery season.

Area personnel also maintained the Cheyenne Wayside Area at the Wood-River Interchange on I-80.

WINDMILL (I-80, Gibbon interchange): The first full year of operation with the campground open to public use, camping started slowly. However, it increased to the point of nearly filling during weekends and running approximately 50 percent capacity during the week. The State Department of Roads erected signs along I-80 about August 20, directing travelers to Windmill.

Day-use increased gradually during the summer months. Early in the

season, fishing was a prime activity, with some Master Angler catches taken. Many large groups and clubs picnicked here during the summer and early fall months, and the swimming beach was popular with both tourists and residents. Dozens of I-80 travelers stopped for a dip when they spotted people in the swimming lake.

Unfortunately, the first drowning in the new swimming lake occurred on June 28. A 16-year-old boy from West Virginia went swimming immediately after eating a heavy lunch. He had a cramp within minutes after entering the water and went down despite efforts by his cousin to save him.

People who were willing to pay for camping privileges were nearly unanimous in stating that they received full value for their money. An estimated three to five units per day did not want to pay for various reasons and were referred to other non-fee state areas.

A new restroom was completed in the day-use area and went into use on August 7. Located close to the camping area, it diverted some traffic from the shower building during busy weekends.

Some 350 trees and shrubs were planted during the fall, primarily in the campground for screening, wind and noise control, and ornamental purposes.

#### OTHER WAYSIDE AREAS:

Pioneer Wayside on U.S. 77 in the Ceresco-Swedeburg area was completed and opened for use.

Cochran SWA - (Crawford) maintained by District I personnel, had its entrance sign demolished, apparently by an auto accident.

Elkhorn SWA - (Norfolk) underwent some road improvement. There were no improvements added at Millstone SWA - (Meadow Grove). Both were maintained by District II personnel.

American Legion (Hastings), Beaver Creek (Hazard), Chalkmine (Scotia), D.L.D. (Hastings), Mormon Trail (Clarks), North Loup (St. Paul), and Republican Valley (Guide Rock) were maintained by District III crews.

Lodgepole SWA (Bushnell) was maintained by the Wildcat Hills crew.

District V maintained Beaver Dam (junction of Nebraska 12 and U.S. 20), Blackbird (Decatur), Blue River (Dorchester), Blue Valley (Seward), Brownville, Crosstrails (Fairmont), and Little Nemaha SWA (Unadilla).

Most areas having American elms have lost many trees, and short-handed crews with limited equipment worked many hours at tree and stump removal. Work is now being expedited since the bureau has acquired a stump-removing machine. This removal should ease maintenance and improve appearance on the areas.

#### I-80 WAYSIDES:

Mormon Island crews maintain Cheyenne SWA at WoodRiver Interchange,



with Windmill personnel handling the waysides at the Shelton Interchange (War Axe), the Odessa Interchange (Union Pacific), and the Maxwell Interchange.

War Axe State Wayside Area had usage comparable to the past two years. Some large catfish and bass were caught in the lake during the summer.

Union Pacific State Wayside Area was flooded by the Platte River during the late winter and spring months. On June 4, the Windmill crew, a small crew from Buffalo County, and interested local farmers diked off the river west of the Odessa Interchange to stop this flooding. Some trees were lost, but the restroom and shelters sit on high ground and the water did not reach them. This area continues to get heavier usage than the other small areas along I-80.

The area at the Maxwell Interchange received a minimum amount of attention. There was enough rainfall to keep most of the trees and shrubs alive.

#### MAINTENANCE SECTION

DISTRICT I: In addition to maintaining area waysides, the crew maintained Box Butte, Cottonwood Lake, Walgren Lake state recreation areas, Gilbert-Baker and Smith Lake special-use areas. Road repair and \$1,100 worth of gravel was hauled and spread on the main road at Box Butte Reservoir.

Boy Scouts from Alliance and Hay Springs had a cleanup project during September. Several loads of broken concrete were hauled from Hay Springs to control erosion. The old house and cabins were declared surplus and removed from the area to improve its appearance.

DISTRICT II: Trees were planted at Atkinson, Long Pine, and Merritt recreation areas. General maintenance was performed at all areas. Storm-damaged trees were removed from Atkinson Recreation Area. Roads were repaired at most areas. This crew maintains Atkinson, Long Pine, Long Lake, Pibel Lake, Merritt recreation areas, Alkali, and Ballards Marsh special-use areas, and Elkhorn and Millstone state wayside areas. No capital construction was undertaken this year.

DISTRICT III: This crew handles maintenance at Bowman, Cottonmill, Hord, Crystal Lake and Ravenna state recreation areas in addition to seven wayside areas. Assistance is also provided as needed at Fort Kearny and Stolley as well as other areas in the region.

DISTRICT IV: Duties include maintenance responsibilities at Lake Maloney, Johnson Lake state recreation areas, plus Hayes Center, Sutherland, Wellfleet, Midway, Jeffrey special-use areas and Maxwell State Wayside Area. No major development was done outside of Johnson Lake State Recreation Area. The crew assisted with the removal of dead trees at Buffalo Bill Ranch State Historical Park.



DISTRICT V: In addition to maintaining eight wayside areas and Salt Valley sites, the crew also maintained Alexandria, Memphis, Omadi, Rockford Lake, and Brownville state recreation areas, Riverview Marina and Burchard Lake special-use areas.

The crew assisted at Two Rivers on flood clean up, plus painting the two area residences. They also spent considerable time at Arbor Lodge helping prepare the facilities and area for the Centennial celebration in April of 1972.

#### SIGN SHOP

Some 271 different jobs were processed in 1971. Personnel made 131 routed signs and posts for the new camping area at Ponca and 9 large hand-lettered signs for the Platte Valley wildlife areas along Interstate 80. Out-of-the-ordinary tasks included removal of decals from 30 cars for Law Enforcement, Boating, and Game. The new sign catalog was prepared and neared completion, including art work, pictures, and layout. It will help standardize Commission signs in use across the state. While it is difficult to compare operating years because of the different types of signs, 937 more signs were manufactured in 1971 than in 1970.

#### Signs Completed

Silk-screened	3,383
Special hand-lettered	108
Routed on redwood	169
Engraved on plastic or brass	53
TOTAL	3,713

#### Sign Blanks Processed

Made from raw material plywood and metal	1,899
Factory-primed blanks	205
Aluminum-refinished blanks	6
Plastic blanks	468
Raw blanks, cut ready to coat	149
TOTAL	2,727

#### Miscellaneous

New signs designed	24
New silk screens made	9
Coated sign blanks on hand	4,548
Finished signs in stock, ready to go	2,251

# VISITATION

<u>AREA</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>
Arbor Lodge State Historical Park	182,566	199,652	220,835
Buffalo Bill Ranch State Historical Park	45,411	55,054	66,823
Chadron State Park	192,921	160,018	152,451
Fort Kearny State Historical Park	103,731	80,456	101,008
Fort Robinson State Park	No Estimate	No Estimate	No Estimate
Mormon Island State Wayside Area	None	209,977	361,131
Niobrara State Park	128,201	127,679	130,402
Ponca State Park	175,639	205,619	225,675
Stolley State Recreation Area	142,752	164,897	105,600
Two Rivers State Recreation Area	370,716	337,822	215,093
Victoria Springs State Recreation Area	71,033	66,637	55,497
Windmill State Wayside Area	<u>None</u>	<u>None</u>	<u>123,458</u>
	1,412,970	1,607,811	1,758,153

# CABIN GUESTS

<u>AREA</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>
Chadron State Park	2,753	3,095	2,895
*Fort Robinson State Park	3,146	3,243	3,059
Niobrara State Park	2,317	2,250	2,151
Ponca State Park	2,477	2,609	2,794
Victoria Springs State Recreation Area	<u>387</u>	<u>337</u>	<u>206</u>
	11,080	11,534	11,105

\*Fort Robinson State Park -- 2,134 Room Guests for 1971

# CAMPERS

<u>AREA</u>	<u>1970</u> <u>INDIVIDUAL</u> <u>CAMPERS</u>	<u>1971</u> <u>INDIVIDUAL</u> <u>CAMPERS</u>	<u>1970</u> <u>GROUP</u> <u>CAMPERS</u>	<u>1971</u> <u>GROUP</u> <u>CAMPERS</u>
Chadron State Park	12,745	11,998	560	469
Fort Robinson State Park	7,653	6,069	None	None
Mormon Island State Wayside Area	12,452	13,988	None	200
Niobrara State Park	3,866	4,213	618	495
Ponca State Park	10,818	16,365	None	None
Stolley State Recreation Area	4,216	None	None	None
Two Rivers State Recreation Area	25,988	14,202	None	None
Victoria Springs State Recreation A.	2,051	1,902	None	None
Windmill State Wayside Area	<u>None</u>	<u>9,444</u>	<u>None</u>	<u>None</u>
	79,789	78,181	1,178	1,164

## STATE PARK INCOME

1966	1967	1968	1969	1970	1971
\$142,189.00	\$153,349.00	\$176,794.00	\$191,102.00	\$215,396.00	\$227,716.26

## STATE PARK AND RECREATION AREA INCOME

<u>AREA</u>	<u>1970</u>	<u>1971</u>
Arbor Lodge State Historical Park	\$ 7,295.26	\$ 8,664.47
Buffalo Bill Ranch State Historical Park	4,240.77	3,309.65
Chadron State Park	36,982.14	34,641.92
Fort Kearny State Historical Park	1,076.18	1,225.60
Fort Robinson State Park	79,545.49	82,210.16
Mormon Island State Wayside Area	9,013.50	10,449.90
Niobrara State Park	24,720.53	25,353.82
Ponca State Park	33,213.75	42,475.39
Stolley State Recreation Area	1,339.82	None
*Two Rivers State Recreation Area	15,914.03	11,039.98
Victoria Springs State Recreation Area	2,054.20	1,865.00
Windmill State Wayside Area	None	6,480.37
TOTAL	\$215,395.67	\$227,716.26

\* \$57,835.50 -- Additional income collected at Two Rivers State Recreation Area in relation to fish and game activities during 1971.

## HORSE (TRAIL RIDE) AND SWIMMING POOL INCOME

<u>AREA</u>	<u>HORSE (TRAIL RIDE)</u>	<u>SWIMMING POOL</u>
Chadron State Park	\$ 4,855.50	\$ 4,231.00
Fort Robinson State Park	4,157.00	None
Niobrara State Park	2,733.50	3,219.60
Ponca State Park	9,064.50	5,089.75
Two Rivers State Recreation Area	None	3,559.25
	\$20,810.50	\$16,099.60



## P E R S O N N E L   D I V I S I O N

Functions of the Personnel Division include administration of payroll, retirement, workmen's compensation, insurance, accident reports, performance evaluations, and personnel records. The division also conducts interviews and tests, checks references, and processes personnel recommendation transactions.

During 1971, over 2,000 letters of application were received, and 423 office interviews were conducted. There were 3 life insurance claims for \$15,071.02.

### PAYROLLS

Permanent: Total state payroll cost - \$2,752,196.16  
Average number of employees per month - 334  
New employees - 16  
Terminated employees - 32

Temporary: Total state payroll cost - \$337,660.03  
Average number of employees per payroll - 101  
Largest payroll - 232  
Smallest payroll - 31

### PERSONAL INJURY ACCIDENTS - 45 - Total State Cost - \$2,493.79

Permanent employees: 31  
Temporary employees: 14  
Time lost from work: 7 employees  
Nature of injury:

Head - 2	Leg - 1	Tooth - 1
Finger - 6	Ear - 1	Ankle - 1
Eye - 5	Back - 5	Burn (face and arm) - 1
Knee - 5	Lip - 1	Insect bite - 2
Foot - 2	Arm - 1	Poison ivy - 1
Hand - 3	Face - 1	Rupture - 1
Side - 1	Ribs - 3	Replace eyeglasses - 1

Medical expense by account:	2332-20000 - \$ 15.00	1370-10001 - \$ 7.30
	2332-40000 - 78.66	1370-10009 - 10.00
	2332-52000 - 216.00	1370-11012 - 19.50
	2332-53000 - 5.00	1370-11013 - 354.00
	2332-57000 - 4.00	1370-11017 - 10.00
	2332-58000 - 34.00	1370-12016 - 10.00
	2332-90015 - 73.45	1370-23000 - 954.53
	2332-90017 - 580.70	1370-23020 - 41.00
	2332-90029 - 13.00	1370-23051 - 46.65
	2332-90038 - 7.00	1370-24000 - 4.00
	2332-90060 - 5.00	
	2332-91007 - 5.00	

Workmen's Compensation: 1 claim - 1370-11013 - \$181.32

# VEHICLE ACCIDENTS - 26

Number of accidents by account and cost to state, if any:

2232-20000 - 4 - \$ 593.20	2332-59000 - 1	1370-11008 - 1
2332-40000 - 11 - 1,622.15	2332-91004 - 1	1370-11017 - 1
2332-90015 - 1 - 48.85	2332-91007 - 1	1370-23000 - 2
2332-90017 - 2 - 97.11		1370-24021 - 1

## P L A N N I N G   A N D   P R O G R A M M I N G   B U R E A U

Primary responsibilities of the Planning and Programming Bureau are administration of the Land and Water Conservation Fund program, administration of the federal aid programs for fish and wildlife, and maintenance of the comprehensive state outdoor recreation plan for Nebraska.

### LAND AND WATER CONSERVATION FUND

The Land and Water Conservation Fund Act of 1965 was enacted by Congress to assist the states in acquisition and development of urgently needed outdoor recreation areas and facilities. This act provides 50 percent federal grants-in-aid to the various states for comprehensive planning, acquisition, and development of outdoor recreation areas. It also provides that the states may allocate some of the money received to political subdivisions.

State legislation provides that 40 percent of the money received from the Land and Water Conservation Fund Act shall be allocated to state projects and 60 percent to projects of political subdivisions. In addition to the 50 percent grant of federal funds, the Game and Parks Commission is authorized to make state grants-in-aid of up to 25 percent to political subdivisions for approved projects.

The Game and Parks Commission delegated authority to an internal "control group" to formulate policy, determine allocation of funds, and establish priorities for projects. This group includes the director, assistant director, and bureau chief of state parks. The director serves as state liaison officer to the Bureau of Outdoor Recreation, the federal agency responsible for administering the Fund Act.

The Planning and Programming Bureau is responsible for administering the program in Nebraska. Activities include: (1) review and processing of all required program documents; (2) fiscal and project control; (3) liaison with political subdivisions, and (4) liaison with other agencies.

#### Summary of Funds for LWCF Projects to December 31, 1971

1. Federal apportionments credited to the State (Total LWCF apportionment to Nebraska):

FY 1965.....	\$ 129,580.00
FY 1966.....	1,059,758.00
FY 1967.....	709,401.11
FY 1968.....	775,441.88
FY 1969.....	568,240.00
FY 1970.....	782,602.00
FY 1971.....	1,483,200.00
FY 1972.....	2,877,675.00
Contingency Grant (Project No. 31-00029 Omaha) ..	193,494.00
Contingency Grant (Project No. 31-00044 Omaha) ..	16,718.64
Contingency Grant (Project No. 31-00097 Lincoln)	150,000.00
Total	\$ 8,746,110.63

- |   |                 |
|---|-----------------|
| 2. Requested obligation of funds.....                   | \$ 8,518,895.69 |
| 3. Funds obligated by Bureau of Outdoor Recreation..... | \$ 6,595,385.25 |
| 4. Reimbursements from federal government.....          | \$ 4,545,766.51 |



### Allocations for state projects

1. Federal apportionments credited to the State (60% of total LWCF apportionment to Nebraska):	
FY 1965.....	\$ 77,748.00
FY 1966.....	635,854.80
FY 1967.....	427,642.04
FY 1968.....	465,265.13
FY 1969.....	340,944.00
FY 1970.....	469,561.20
FY 1971.....	889,920.00
*(40%) FY 1972.....	1,151,070.00
Total	\$4,458,005.17
2. Requested obligation of funds.....	\$2,601,174.73
3. Funds obligated by Bureau of Outdoor Recreation.....	\$2,559,124.73
4. Reimbursements from Federal Government.....	\$2,166,986.30

### Allocations for projects of political subdivisions

1. Federal apportionments credited to political subdivisions (40% of total LWCF apportionments to Nebraska):	
FY 1965.....	\$ 51,832.00
FY 1966.....	423,903.20
FY 1967.....	281,759.07
FY 1968.....	310,176.75
FY 1969.....	227,296.00
FY 1970.....	313,040.80
FY 1971.....	593,280.00
*(60%) FY 1972.....	1,726,605.00
Contingency Grant (Project No. 31-00029 Omaha).....	193,494.00
Contingency Grant (Project No. 31-00044 Omaha).....	16,718.64
Contingency Grant (Project No. 31-00097 Lincoln)....	150,000.00
Total	\$4,288,105.46
2. Requested obligation of funds.....	\$4,060,890.52
3. Funds obligated by Bureau of Outdoor Recreation.....	\$4,036,260.52
4. Reimbursements by State to political subdivisions	
a. Federal Funds.....	\$2,378,780.21
b. State Funds.....	\$ 931,572.64

\*Legislation effective in fiscal year 1972 reversed the percentages.

### Summary of Land and Water Conservation Fund Projects Completed in 1971

#### Political Subdivisions:

Project Number		Total	Federal	State	Local
31-00008	Development of Community park and camp area	\$137,750.00	\$68,875.00	\$34,437.50	\$34,437.50
31-00009	Table Rock-Development of a 3-acre park for village	\$ 8,500.00	\$ 4,250.00	\$ 2,125.00	\$ 2,125.00
31-00064	Crofton-Development of Crofton municipal park	\$ 84,000.00	\$42,000.00	\$21,000.00	\$21,000.00

31-00066	Schuyler-Development of trailer and tent camp	\$ 9,799.48	\$ 4,899.74	\$ 2,449.87	\$ 2,449.87
31-00067	Cambridge-Development of municipal park	\$30,000.00	\$15,000.00	\$ 7,500.00	\$ 7,500.00
31-00077	Pierce-municipal park development	\$62,715.36	\$31,357.68	\$15,678.84	\$15,678.84
31-00079	Alma-Alma recreation development	\$29,000.00	\$14,500.00	\$ 7,250.00	\$ 7,250.00
31-00090	Randolph-construction of municipal swimming pool	\$93,000.00	\$46,500.00	\$23,250.00	\$23,250.00
31-00095	Callaway municipal swimming pool	\$64,516.08	\$32,258.04	\$16,129.02	\$16,129.02
31-00101	Ord-Acquisition of a 6-acre addition to present park	\$ 9,350.00	\$ 4,675.00	\$ 2,337.50	\$ 2,337.50
31-00110	Fremont-neighborhood park acquisition (Rawhide Park)	\$51,000.00	\$25,500.00	\$12,750.00	\$12,750.00
31-00116	Wolbach-Acquisition of 8-acres for village park	\$ 3,200.00	\$ 1,600.00	\$ 800.00	\$ 800.00
31-00121	West Point-park acquisition	\$29,500.00	\$14,750.00	\$ 7,375.00	\$ 7,375.00
31-00133	Broadwater-park development	\$ 1,200.00	\$ 600.00	\$ 300.00	\$ 300.00
31-00134	Columbus-Lost Creek Park	\$48,000.00	\$24,000.00	\$12,000.00	\$12,000.00

In addition to acquisition and development projects completed during 1971, significant numbers are in progress. Some 11 state projects are active at the close of calendar year 1971, as well as 60 projects of political subdivisions. At various stages of completion, these indicate continuing activity under the Land and Water Conservation Fund Program.

#### COMPREHENSIVE OUTDOOR RECREATION PLANNING

Planning effort for 1971 was concentrated mainly on the Environmental Features Study of the Eastern Nebraska Urban Region, the revision and publication of the Fish and Wildlife Plan, and the planning grant application and preliminary work for the revision of the Nebraska Comprehensive Outdoor Recreation Plan.

The 11-county study, financed by a H.U.D. grant, involved field reconnaissance, inventory, and mapping of the significant environmental resources of the area and featured a series of transparent overlay maps.

A large number of revisions and additions were made in updating the inventory volumes of the Fish and Wildlife Plan during 1971. Color reproductions of game range and water resources maps were completed and the wildlife inventory section was delivered to the printer.



Dr. Robert K. Davis of George Washington University began work on a pilot study to determine the feasibility of a county license sales model in projecting demand and supply factors in hunting, fishing, and related recreational uses of the state's natural resources. Much of the data provided was collected and analyzed as a part of the Fish and Wildlife Plan.

Fish and wildlife and recreation data were used in providing contributions to highway corridor studies, environmental impact statements, inter-agency planning efforts, and river-basin studies. Several comprehensive plans were reviewed, particularly in reference to outdoor-recreation planning. Two papers were presented in December by the staff at the 33rd Annual Midwest Fish and Wildlife Conference.

#### FEDERAL AID TO FISH AND WILDLIFE RESTORATION

In recognition of the importance of hunting, fishing, and associated forms of recreation to the American people, and of the need to conserve and restore the fish and wildlife resources that make them possible, Congress passed two important acts to assist state fish and game agencies in their stewardship. These acts were intended to stimulate progressive research and management through programs financed in part by federal grants-in-aid to the states and territories.

The first piece of legislation or act, known as the Federal Aid in Wildlife Restoration Act of 1937, provides that receipt from an 11 percent federal excise tax on arms and ammunitions be apportioned annually to the states and territories for wildlife restoration. Companion legislation was passed in 1950 when the Federal Aid in Sport Fish Restoration Act was approved. The revenue that supports this act comes from a 10 percent federal excise tax on fishing equipment.

To participate in these programs, a state must assent to the provisions of the acts and must annually submit a letter to the Secretary of the Interior indicating their desire to participate in the programs.

When properly documented, federal-aid funds may be used on an array of activities such as: (1) Research--studies designed to develop knowledge of fish, wildlife, or their habitats; (2) Survey and inventories--studies designed to collect and interpret information needed by administrators for resource management decisions; (3) Technical assistance--provides for assistance to those individuals that exercise management control over land and water resources; (4) Land acquisition--lands acquired must be used primarily for the benefit of wildlife populations and public use; (5) Development--activities designed to improve the habitat or enhance public use; (6) Maintenance--upkeep and repair of capital improvements acquired or constructed under federal-aid projects; and, (7) Coordination--planning, supervision, and administration of the Federal-Aid Program.

During 1971, the Pittman-Robertson program made \$553,585.20 available to Nebraska for work pertaining to wildlife restoration. The Dingell-Johnson program earmarked \$187,464.79 for Nebraska for work pertaining to sport fish restoration.



The expenditures (figures include both state and federal shares) for 1971 were as follows:

#### Development

Fisheries Development, F-7-D	\$ 57,647.26
Habitat Restoration, W-17-D	175,557.60
Sacramento Game Management Area, W-23-D	38,161.25
Plattsmouth Waterfowl Management Area, W-29-D	22,560.80
Construction of Office/Laboratory Building, FW-11-D	<u>62,382.77</u>
Total	\$356,309.68

#### Research

Fisheries Research, F-4-R	\$ 78,732.95
Wildlife Survey and Investigations, W-15-R	187,516.08
Research Studies on Terrestrial Wildlife, W-38-R	<u>70,045.78</u>
Total	\$336,294.81

#### Coordination

Fish and Wildlife Coordination, FW-6-C	\$ <u>19,843.78</u>
TOTAL EXPENDITURES	\$712,448.27

### COMMERCIAL FISHERIES

In 1964, the Commercial Fisheries and Development Act was passed. This act provides financial aid to the states and territories for the development and improvement of their domestic commercial fishing industry. Projects funded under this act are designed to improve the productivity of the processor or fisherman; expedite the diversification of an existing industry or the establishment of a new industry, or lead to increased consumption of domestic fishery products.

The one project, 4-57-R, funded under this program in Nebraska is designed to provide more efficient utilization of undesirable species such as carp-suckers, gizzard shad, and carp. This work is being carried out on Lake McConaughy and that portion of the North Platte River directly upstream from the reservoir. Expenditures during 1971 were \$26,418.00 of which federal funds paid 75 percent.

### RESOURCE MONITORING

During 1971, a major activity of conservation interests at the national level centered around stream channelization and other water-resource projects that adversely affect streams and associated environments. The section drafted the department's testimony for congressional subcommittee hearings on this subject conducted during the spring and summer.

Water-resource projects investigations during the year were also largely concerned with a determination of the impact on stream-associated resources. These ranged from participation in continuing planning efforts to arrive at an environmentally sound approach to bank stabilization on the Missouri River to clearing and snagging project proposals of the Corps of Engineers and local political subdivisions.\*

Activities relating to Bureau of Reclamation projects were participation with the Bureau of Sport Fisheries and Wildlife in the Mid-State project re-evaluation and review of environmental impact statements for the O'Neill (Norden Reservoir) and North Loup (Calamus Reservoir) projects.

Participation in Public Law 566 projects was concerned primarily with the development of planning-aid letters to assist the watershed-planning parties of the SCS and State Soil and Water Conservation Commission in their preliminary investigations for a number of projects.

Section personnel represented the department on the Soil and Water Conservation Commission. In addition to routine meetings and activities, major projects included review of the State Water Plan and Natural Resource District implementation, and Data Bank input.

Numerous Department of Roads projects and environmental impact statements were reviewed and commented on. Impact statements and plans were also reviewed on airport, park, urban development, and other types of projects submitted for review through the State Office of Planning and Programming.

Assistance was provided the Public Land Law Review Committee of the International Association of Game, Fish and Conservation Commissioners in preparing a position statement on the Public Land Law Review Commission report.



## R E A L T Y

In 1971, the Realty Section was involved in land acquisition; appraisal; land reconnaissance; lease cancellations, renewal, and payment; schools and workshops; appraisal review; building management; legal liaison, and various miscellaneous assignments.

### New Building Complex

Occupation of the new building complex was completed in July. This move brings together all Lincoln-based personnel under one roof for the first time in 10 years. Prior to this move, the various divisions were located at five different sites around Lincoln. Coordination of the move, communication need, etc., were handled by the Realty Section.

### Land Acquisition

During the year title was acquired to three tracts of land from the Bureau of Land Management. The 3 tracts totaled 53.7 acres and were acquired for a transfer fee of \$2.50 per acre. The tracts were designated as state special use areas. At the Commission's request, the Nature Conservancy purchased a 320-acre tract adjacent to Pawnee Prairie SUA. An attempt to acquire a school section from BELF as an addition to the Fort Robinson complex was abandoned because the condemnation award exceeded the Commission budget figure.

### Reconnaissance, Negotiations, Transfers:

Following the auctions of last year on the Iron Horse Trail, deeds were completed and delivered to the successful bidders. Negotiations were continued in an attempt to complete the Indian Cave State Park. Work also proceeded with the U.S. Forest Service on the expansion of the trailer-park facilities at Chadron State Park. The Fish and Wildlife Service allocated \$112,972 for the acquisition of wetlands. Negotiations are underway in an attempt to accomplish these acquisitions before July of 1972.

### School

During February, Jack O'Keefe and Ralph Craig attended the Nebraska Realtors Institute. Courses I and II have now been successfully completed, and Course III (the final one) will be taken in February of 1972.

### Appraisal Review

Appraisals were submitted by 18 political subdivisions seeking federal-aid funds under the Land and Water Program. These appraisals were reviewed and accepted after they complied with BOR requirements.

### Leases, Easements, etc.

- After the move to the new headquarters was accomplished, leases on quarters formerly occupied were cancelled. Leases on storage facilities throughout the state were reviewed and payments were made on those retained. Easements were granted to both state and county for road purposes. Water-use and/or storage rights were acquired on several tracts from the State Water Resource Department. The Westroads Information Station lease was cancelled.



## B U R E A U O F W I L D L I F E S E R V I C E S

The Bureau of Wildlife Services represents an administrative entity which is new to the Game and Parks Commission. Its existence was prompted by a need to integrate and coordinate the activity of the three divisions which serve directly in the development and implementation of fish and wildlife management programs.

It has long been recognized that wildlife management on a broad scale can be accomplished only through effective management of the habitat. With this recognition, an earlier reorganization of the agency was undertaken in 1954. The primary thrust of that change was to develop more effective communication with the farmer and rancher since their decisions and their operations were principally responsible for the changes in the Nebraska environments and hence the welfare of wildlife. The recognition of the necessity to manage the habitat continues, as does the need to maintain contact with the landowner. In recent years, however, broad, coordinated changes in land use have occurred, not as a result of independent decisions by farmers and ranchers. Rather, they have come about through compliance with governmental programs. While the central purposes of these programs serve specific needs, they carry with them the potentials for broad-scale benefits or equally broad-scale detriments to wildlife. Such programs must be carried out with well-advised inputs to assure that wildlife and the environmental elements are protected. These inputs are dependent on active coordination with other governmental and citizen bodies. Also occurring in recent years has been the emergence of many interest groups having concerns for non-game wildlife species previously given little serious attention. These species deserve the attention of this agency.

To cope with these new needs, five basic changes were projected into the plan of reorganization:

- (1) The general activities of the three divisions (Game, Fisheries, and Research) were brought under a single administrative head to facilitate coordination.
- (2) The areas of concern of the Fisheries and Game divisions, previously concerned almost entirely with harvested species, were broadened to include all wildlife and were renamed the divisions of Aquatic Wildlife and Terrestrial Wildlife.
- (3) Four persons were selected from the Terrestrial Wildlife Division and an equal number from Aquatic Wildlife to serve as specialists and each has been assigned a specific area of concern. Working with his division chief, the specialist defines a broad program to serve the resources with which he is charged. He relies not only upon services of personnel of the agency, but also upon cooperation from any other group or agency which exerts an impact upon it.

- (4) A new position (bio-enforcement specialist) was created to facilitate the transfer of information and technical services between this bureau and enforcement personnel.
- (5) Field assistants were supplied in all of the districts to relieve supervisors of some of the routine and laborious duties previously expected of them.

#### Bio-enforcement Specialist

Duties of this position are many and varied. The broad responsibility concerns assisting or serving in a consultant capacity to officers in certain technical tasks such as the identification of biological material (e.g. meat, blood, hair, etc.) in the development of evidence, documenting pollution problems, etc. This necessitates the preparation of informational material for officer field use, contacting numerous personnel in the Game Commission as well as other agencies, and assisting in developing a personnel training program. In order to be within easy traveling distance of a large number of officers while having access to needed laboratory and reference materials, this position was based at Kearney State College.

Initially, several conservation officers were contacted in an attempt to determine their needs and what assistance could be provided with this position.

District Law Enforcement meetings (District II and IV) were attended and training sessions pertaining to waterfowl identification and grouse aging and sexing techniques were completed. Opening weekends of grouse and pheasant seasons were spent accompanying Conservation Officers and assisting them with checking hunters and various other duties.

Opening weekend of deer season was spent assisting the Terrestrial Wildlife Division by operating a deer check station for three days.

Several meetings and conferences were attended to keep abreast of new techniques. Among those attended were two Terrestrial Wildlife Division meetings, a Fish-Kill Investigation Seminar, and the Midwest Fish and Wildlife Conference.

Constant contact with Research Division personnel was maintained, since much of the blood and hair identification work is performed in cooperation with the Research chemist. Other cooperative work with this division included collecting pheasants and analysis to determine mercury content and presence of disease and parasites with special emphasis of collecting and preserving techniques.

Work with hair identification and the refinement of techniques as well as research and literature review on electrophoresis consumed many hours. In addition, duck wings and grouse feathers and wings were collected to be used as teaching aids in training sessions.

Numerous conservation programs were presented to various youth and adult groups in the Kearney area and surrounding community. Some of the groups involved were: Kearney State College Wildlife Club, Kearney State College Industrial arts clubs, grade schools, biology seminar at Kearney State College and Scout groups. It is evident that public presentations will continue and increase as various organizations become aware of the availability.

Information on "Estimating the Time of Death in White-tailed Deer" was compiled and distributed to the conservation officers for field use. This and other material will eventually constitute parts of an information booklet being compiled for officer field use.



## AQUATIC WILDLIFE DIVISION

The Aquatic Wildlife Division's chief assignment is to perpetuate and develop Nebraska's aquatic renewable resources and to control their use. These resources include fish, frogs, turtles, crayfish, and freshwater mussels. The division also works for the protection of the habitats which support these renewable resources. The primary objective of the division is to manage the aquatic renewable resources for the benefit of man now and in the future. The attempt to achieve this objective involves many activities, including fish population inventories of lakes and streams, creel censuses, fish tagging, habitat improvement, population manipulation, renovation, new fish introductions, fish stocking, recommendation for regulations, and public education. All are carried out primarily by personnel in the five administrative districts. In addition, statewide activities are supported by specialists in the areas of Natural Waters, Water Pollution, Reservoirs, and Limnology.

### Administrative Districts

#### Fish Population Inventories

This activity is carried out on reservoirs, lakes, ponds, and streams throughout the state and is aimed at supplying basic information on specific problems. Type of information collected includes species distribution, relative abundance, sizes, growth rates, survival of stocked fish, opportunities for habitat improvement, evaluation of management techniques, to provide a basis for regulation and need for fish stocking. Surveys collecting various elements of the information were carried out on 92 lakes, ponds, and reservoirs and 6 streams during 1971.

#### Creel Census

A complete angler-use record was carried out on Two Rivers trout lake. No other creel census information was collected.

#### Fish Tagging

This activity provides information on stocking success, seasonal migration, harvest, and population size. Some 17,982 fish were tagged or otherwise marked during the year. Species marked included rainbow stocked in Soldier Creek, Niobrara River, Lodgepole Creek, and Merritt Reservoir; brown trout stocked in Long Pine Creek; walleye and largemouth bass collected in Merritt Reservoir; and carp, channel catfish, and flathead catfish collected in the Little Blue River.

#### Habitat Improvement

This includes the development of improvements to help perpetuate and enhance fish populations. Lake work included aeration to prevent winter kill on five lakes at the Fremont State Recreation Area, water-level fluctuation to enhance spawning areas for northern pike at Wellfleet, Hayes Center,

and Rock Creek state lakes. Bank stabilization work was carried out on Nine Mile Creek, and fences were maintained on Otter and Nine Mile creeks to protect trout spawning and nursery areas.

#### Population Manipulation

This practice involves removing rough fish or overpopulated pan fish through seining and/or mechanical drawdown and is carried out in waters where past experience has proven it to be practical. Walgren Lake in Sheridan County was seined for removal of bullheads, and Box Butte Reservoir in Dawes County was seined for removal of carp and stunted yellow perch. Verdon Lake in Richardson County was seined for removal of stunted bluegill.

#### Renovation

Renovation is a form of population control used in situations where fish populations are unproductive of desirable fish and where good control over reinfestation of undesirable fish is possible. In such work the entire fish population is removed by chemical treatment and desirable game fish are restocked. During 1971, 21 lakes totaling 127 acres were renovated and restocked with desirable game fish.

#### New Fish Species

The introduction of striped bass was continued with 103,722 stocked in Lake McConaughy. Gizzard shad were initially stocked in Lake Minatare to provide forage for white bass and other game fish.

#### Fish Kills

District personnel investigated 14 fish kills involving lakes and 7 involving streams. In addition, pollution problems were investigated on five streams.

#### Miscellaneous

Assistance was provided the Terrestrial Wildlife Division on deer, antelope, and turkey check stations. The hatchery system was helped on northern pike spawn-taking and fish distribution. Programs on fishery management activities were presented to 15 groups during the year. A total of 11 administrative reports on management activities was completed.

### Statewide Activities

#### Natural Waters

Under reorganization, a new position of natural waters specialist was filled July 1, 1971. This position, located in Lincoln, is responsible for developing programs and servicing needs related to perpetuation of natural water resources throughout the state. The major effort during 1971 was directed towards phasing out projects already in progress at the time of reorganization.



A report summarizing the results of a previously conducted postcard fishing census was completed.

Considerable time was spent in completion of sampling and tabulating data from a study on Rough Fish Utilization. This study was formerly headquartered in Columbus and phasing out of the study was necessitated by the resignation of the former project leader. The study involves defining the seasonal population levels and migration patterns of carp and carpsuckers in Lost Creek, Taylor Creek, and the Elkhorn River, plus an evaluation of tagging techniques for these species. A formal report on this work will be completed in 1972.

Initial work was completed in preparing a project proposal for a State-wide Stream Survey Project.

#### Water Pollution

A new position of pollution specialist was filled in December of 1971. This position, located in Lincoln, will be primarily responsible for developing programs and servicing needs related to pollution abatement and control for purposes of enhancing fishery resources. Activities during 1971 were limited to orientation in the new position.

#### Reservoirs

The reservoir specialist was filled by an individual involved full-time in an ongoing project concerning commercial fisheries research and development. Therefore, no activities related to the new position were carried out. Following is a summary of results for the commercial fisheries research and development project for 1971.

Field activity under the commercial fisheries project is centered around an electric barrier and fish trap located on the North Platte River immediately upstream from McConaughy Reservoir. The project is concerned with establishing the seasonal migration and availability of commercial fishes from McConaughy into the North Platte River upstream. Objectives are to establish the seasonal periods of movement of each species of fish, the magnitude of this movement, and the potential for commercial harvest. During 1971, additional information on periods of seasonal movement was established for several species, and life history information was collected on a number of species. During the year, 12,625 fish were collected in the trap, including 21 species. In addition, sampling of fish in McConaughy was carried out with the basic objective of gaining a better understanding of the relationship between river migrating and reservoir populations. The seasonal availability and distribution of reservoir fish was established from a total catch of 5,843 fish, including 22 species. A total of 900 walleye collected at the trap during March and April was marked by finclipping to estimate the size of the spawning migration.

The project will be completed in 1972 and a final completion report will be prepared.



## Limnology

This project is responsible for developing basic information on Nebraska fishing waters concerning limnological features including water quality, plankton, benthic organisms, and basic productivity.

Extensive coverage of the sandhill lakes during the year resulted in the collection of new hydrobiological information from 36 lakes and additional information from 44 previously surveyed lakes. Monthly primary and secondary trophic levels were examined in four lakes possessing varying water quality characteristics. Analyses were made of the role of organic and inorganic nutrients influencing seasonal fluctuations of rates of production. A positive response of the phytoplankton and zooplankton to season, nutrient enrichment and alkalinity in several lakes was established during the year. The levels of sestonic material seasonally available in sandhill lakes may provide a reliable index for determining the annual production of biomass. The response of fish populations to changes in primary and secondary trophic levels has yet to be investigated. Some progress has been made in describing an individual lake's biomass (weight of all living material present at a given time) as a direct function of hydrochemistry. An accelerated lake sampling program during 1972 will complete the major field studies of the projected hydrobiological program with analyses of field data and preparation of the final report starting shortly thereafter.

Water quality information, including B.O.D., C.O.D., filterable and non-filterable solids, was obtained from all state fish hatcheries. The collection of limnological information from the I-80 lakes, rainbasin lakes, and turbid ponds was completed. Collections of phyllopoda from all regions of the state were completed. Lake McConaughy C<sup>14</sup> studies were completed and results partially analyzed.

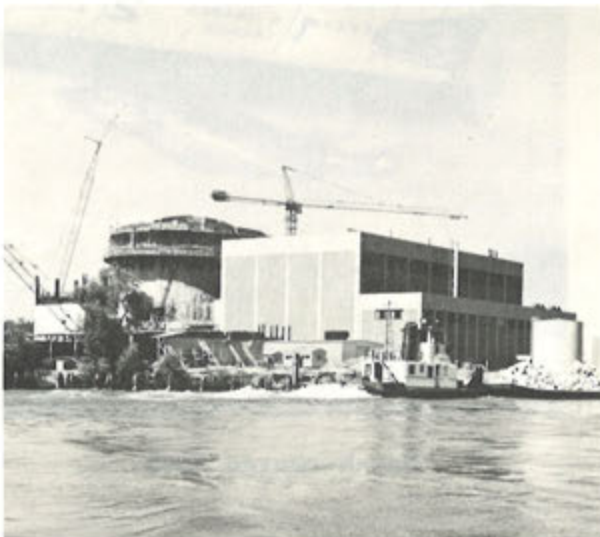
## R E S E A R C H   D I V I S I O N

The Research Division is charged with developing practical and effective techniques for fish and wildlife management. Since the basis for our fish and wildlife resources is the environment, most of the studies conducted were intimately concerned with the environment.

In addition to these research and monitoring studies, the division performs various service activities. Included are scientific analyses for law enforcement, study and survey design, and the input of knowledge to various programs carried on outside of this division.

The division is divided into two sections - one with responsibility for aquatic research and the other with responsibility for terrestrial research. During 1971, the aquatic research section carried out a variety of studies plus development of a booklet on the fishery resources in Nebraska. One of the studies concerned detection of and determination of various heavy metals and their concentrations in fish tissues. The channel catfish was the fish which was used for analyses since this fish is found throughout the state. Seven different watersheds were sampled with ten fish collected from each watershed. These watersheds represented a cross section of agricultural and industrial activities which could contribute heavy metals such as mercury, lead, chromium, zinc, and cadmium to the environment. Only analysis for mercury was completed during 1971. This analysis showed that Nebraska waters probably do not have a problem with mercury pollution. Only one fish of the 70 analyzed contained levels of mercury above the tolerance limit set by the Food and Drug Administration. It was not considered as representative of the situation in the watershed from which it was taken since the other nine fish from this watershed contained relatively low concentrations. Analysis for the other heavy metals should be completed in 1972.

Another study involves the thermal effects of two nuclear power plants being constructed on the Missouri River near Blair and near Brownville. Since these plants will be discharging large quantities of heated water back into the river, a number of agencies, including this Commission, are concerned about their potential environment effects. Eleven federal, state, and local agencies were involved in this study. The Research Division was designated as the study coordinator. In addition to coordination of the overall study, research personnel were responsible for development of a data base on the fishery in the vicinity of these two plants. Other parts of the comprehensive study were concerned with the invertebrate life and the temperature and chemistry of the river. In 1971, the preoperational phase of the study was completed. Since these plants will not

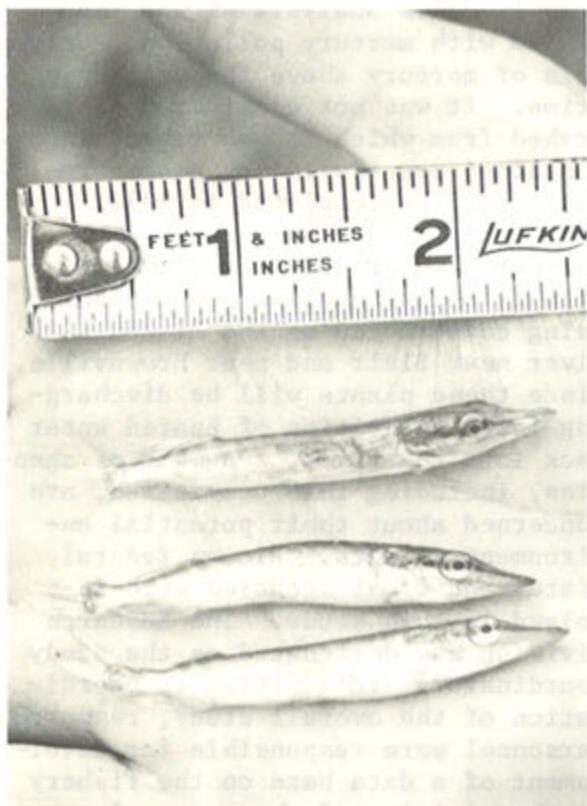


Fort Calhoun Nuclear Power Plant  
on Missouri River near Blair

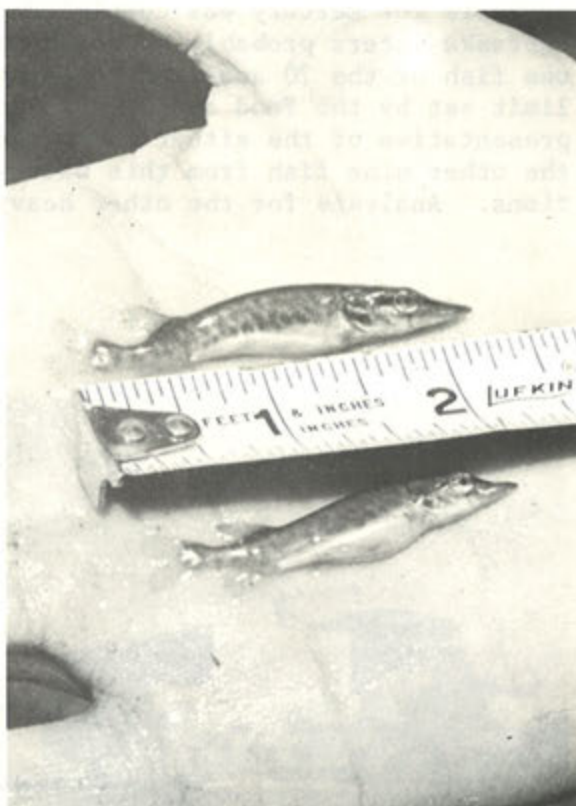


begin operation until 1973, additional field work will not be conducted until after the plants begin discharging warmed water. This will represent the post-operational phase of the study.

Several studies in the aquatic section were concerned with enhancement of the environment for fish. The objective of one of these studies was to evaluate the use of an artificial spawning marsh for maintaining the northern pike population in Bluestem Lake, a southeast Nebraska reservoir. Initial stockings in southeastern reservoirs produce good populations of northern pike. However, adequate spawning habitat is lacking and subsequent hatchery stockings of northern pike have not maintained fishable populations. A  $3\frac{1}{2}$ -acre native grass plot adjacent to Bluestem Lake was diked during 1970 and fitted with an outlet structure. Early in 1971, the marsh was filled with water pumped from Bluestem Lake. Adult northern pike were collected from Pawnee Lake, just prior to spawning season, and stocked in the marsh. The flooded, lush vegetation provided an ideal spawning habitat for the northern pike. Subsequently large numbers of northern pike fingerlings were noted in the marsh. With an abundant supply of food in the form of plankton and aquatic insects, the fingerlings readily reached lengths of  $2\frac{1}{2}$  to  $4\frac{1}{2}$  inches, and about 15,000 were released from the marsh through the outlet structure into Bluestem Lake.



North Platte Hatchery-reared fish



Marsh-reared fish

Comparison in condition of marsh-reared and hatchery-reared northern pike of the same size.



An important part of the study is evaluation of the survival of fish released from the marsh. This evaluation was initiated in the fall of 1971 and will continue during 1972. Although young-of-the-year northern pike are very difficult to locate in lakes, two of the fish released from the marsh were turned up through the use of an electrical-shocking device. This was not a large number of fish, but it was considered a good indication that many of the fingerlings released from the marsh did survive. The real test will come when fishermen begin catching the northern pike in 1972.

Another study concerned with enhancement of the environment for fish was carried on in the North Platte River drainage and Lake McConaughy. The purpose of the study was to improve and increase habitat for the rainbow trout present in this area.

Trout are very specific in their habitat requirements. First of all, they require relatively cold and clean water with sufficient oxygen. Secondly, they must have a gravel substrate under flowing water for spawning. Thus, the habitat available to these fish is limited, since Nebraska is not blessed with abundant cold water in the summer. This study includes an inventory of the coldwater habitat available, the improvement of this habitat for trout production, and the delineation of those streams which are suitable for rearing trout but do not contain spawning gravel. Excellent success has been noted by stocking 1½-inch hatchery-reared rainbow trout in the streams lacking spawning gravel. These fish grow rapidly and migrate to Lake McConaughy at essentially the same time and size as those fish naturally produced in the drainage. They then enter into the fishery in Lake McConaughy. As adults, they migrate up the North Platte River to the stream of their origin. On this migration they enter into the stream fishery. Since suitable spawning gravel is not available in their home streams, few if any of the migrants reproduce and it is necessary to restock the rearing stream the following year. All trout stocked in the drainage are reared from eggs stripped from fish native to Lake McConaughy.

Considerable success has also been achieved by improving the streams which contain suitable gravel but carry too much sand which ultimately smothers the eggs deposited in the gravel. This has occurred where there has been heavy use of the stream and its environs by cattle. In such a situation a stretch of the stream was leased and the cattle fenced out. The vegetation on the shores and within the stream has readily returned to its normal state and prevented sand from washing into the stream. In this condition, it was not long before the spawning gravel was washed free of sand and the rainbow trout spawned successfully. When this study is completed, there will be a comprehensive coldwater fishery management plan developed for the drainage. This should result in an improved trout fishery in both Lake McConaughy and the streams above.

Another research effort of considerable interest was the development of a book on Nebraska fishes. During 1971, the photographs were completed for this publication. This consisted of 88 full-color pictures of 82 of the species of fish found in Nebraska. Because of their rarity, four species were not obtained for photographing. Along with these photographs will be a narrative description of the fish and their habitats plus a brief analysis

of the future of Nebraska's fish. Much of the writing of this narrative was completed during 1971. The booklet should be of considerable interest to fishermen, scientists, and the general public. One of the unique features of the book was that all photographs were taken of live fish and depict them in their natural colors. It is anticipated that this booklet will be completed and available to the public by June, 1972.

During 1971, the terrestrial research effort centered on completion of long-term ecological studies related to prairie grouse and the ring-necked pheasant. Service work for the Law Enforcement Division was continued in the areas of meat, blood, and hair identification. Two new studies initiated during the year centered on the potential impact of environmental change in the SandHills and on initiation of computer processing of data.

The final phases of long-term pheasant research studies were directed toward preparation and publication of a pheasant bulletin. Results of past research efforts appearing in the bulletin will center on populations and harvest, as well as reproductive and ecological parameters affecting pheasant numbers. Research results dealing with ecological relationship of wetlands to pheasants and nesting cover preferences were presented at technical conferences during the year.

Completed during the past year was a short research study on pheasant production by wild breeding. The Cornhusker Special Use Area near Grand Island was utilized to determine the biological and economic feasibility of producing pheasants in areas of deficient nesting cover. Flightless game-farm hens were confined in one-acre, open-topped pens at three stocking densities. Insemination was provided by wild cocks. Hens then raised their young and left the pens shortly after hatching. Analysis of data has indicated that biologically such a system was workable. Nesting success was 11 percent with a production of 21 chicks per acre per unit of nesting cover. The cost of each chick produced under this system was considered too high for economic feasibility.

Cooperative environmental monitoring studies were initiated during the year with personnel from the Terrestrial Wildlife and Law Enforcement divisions. Objectives of this statewide study were to collect basic information on disease parasites and pesticide effects on wildlife numbers to provide a source of basic reference material for in-service training and to promote interdisciplinary coordination with other agencies involved with wildlife resources.

Approximately 50 pheasants were collected from 8 areas of the state for mercury residue analysis and for a check on disease and parasite occurrence. Completed analyses indicated that while mercury residues occurred in pheasants in all areas of the state, concentrations were very low and would not be considered a problem to public health or pheasant populations.

Prairie grouse studies in 1971 were directed toward summarization of field data preparatory to publication. A doctoral dissertation with emphasis on the relationships between methods of range management for livestock and



grouse populations was continued. Meetings with U. S. Forest Service personnel were held to relate findings to the probable impact of intensified grazing.

A study to investigate the feasibility of computer processing indicated that efficiency and usefulness of data could be improved through machine systems. Data from an annual mail questionnaire sent to grouse hunters in 1971 was processed by computer to demonstrate automated processing of wildlife survey data.

Besides the research studies carried on by the Research Division, the division was also responsible for a number of service activities. One of these was laboratory analysis of materials for law enforcement. This involved the scientific determination of various meats suspected of being illegally taken or possessed game. A number of scientific methods were used to separate deer and antelope meat or blood from beef, pork, and other domestic meats. If hair is associated with the meat, this can also be used in identifying the species of animal from which it came. These laboratory techniques have been very useful in game-law enforcement. In the future blood and meat from other game birds and mammals will be identifiable in the laboratory. With this expansion of capabilities, game-law violators will find it more difficult to circumvent the law.

In addition, the Research Division is often called upon to supply input to projects or programs carried on by other divisions. This consists of survey and inventory design, computerization techniques, animal disease determinations and environmental knowledge possessed by members of the staff.



## T E R R E S T R I A L   W I L D L I F E

### BIG GAME

Permit authorizations for deer and antelope were somewhat lower than during preceding years. Hunting success for deer and antelope was below average, and turkey hunting success was higher than average.

Table 1. 1971 Big Game Harvest

Species	Season	Number of permits	Harvest	Percent success
Deer	Rifle	30,495	13,399	44
	Archery	5,258	920	17
Antelope	Rifle	1,208	962	80
	Archery	95	10	11
Turkey	Spring	1,192	269	23
	Fall	1,700	835	49

### DEER

The recorded deer kill from all causes was 15,384, which was 8 percent lower than in 1970.

The regular 9-day firearm season extended from November 13 through 21 with the entire state open to hunting. Drawings were held for permits in the Blue, Elkhorn, Nemaha, and Wahoo units. Regulations were somewhat stricter than in 1970, with either-sex hunting permitted in 10 of 17 units. Hunters purchased 30,495 permits and bagged 13,399 deer, for a hunter success of 44 percent. Success of persons with bucks-only permits increased in 6 units, remained the same in 1 unit, and decreased in 10 units. Persons with either-sex permits were more successful in 3 units, had the same returns in 1 unit, and were less successful in 5 units. Species composition of the harvest was 47 percent whitetails and 53 percent mule deer, which was an increase of 3 percentage points in the proportion of whitetails. An experimental hunt was held in the Keya Paha Unit, with bucks of both species legal for all hunters and 40 percent of the hunters allowed to take antlerless whitetails. Based on available information, this hunt did not accomplish the desired decrease in harvest of antlerless mule deer and did not substantially increase harvest of antlerless whitetails.

Archery-deer hunting was permitted from September 18 through December 31, exclusive of the period open to rifle hunting. Hunting success was 17 percent, with 920 deer taken by 5,258 permittees. The number of permits issued and total harvest were the highest on record, but hunter success was lower than during most recent years.

Biologists examined 110 does, 78 whitetails and 32 mule deer, to obtain productivity data. Average number of embryos per adult doe (1½ years and older) was 1.8 for whitetails and 1.1 for mule deer, while whitetail fawns averaged 0.7 fetuses. Data indicates normal productivity for whitetails and below average productivity for mule deer.

Losses of deer on highways were comparable (1 percent lower) to 1969, with 1,347 mortalities recorded.

Table 2. Summary of 1970 and 1971 deer harvest by rifle hunters

Management Unit	Valid Permits		Percentage of Either Sex		Harvest		Percent Success	
	1970	1971	1970	1971	1970	1971	1970	1971
Blue	1,004	1,208	0	0	395	452	39	37
Buffalo	2,199	1,999	20	20	922	847	42	42
Calamus	2,072	1,997	0	0	686	724	33	36
Elkhorn	1,514	1,621	20	0	710	586	47	36
Frenchman	1,998	2,100	20	20	1,013	1,050	51	50
Keya Paha	2,099	2,099	34	40(1)	1,136	1,074	54	51
Loup East	1,600	1,599	20	20	637	554	40	35
Loup West	1,700	1,598	20	20	786	737	46	46
Missouri	2,397	2,398	17	0	916	716	38	30
Nemaha	303	306	0	0	106	148	35	48
Pine Ridge	4,996	4,495	50	40	2,951	2,441	59	54
Plains	1,291	1,099	14	9(2)	617	530	48	48
Platte	2,242	2,022	18	20	1,045	1,005	47	50
Republican	1,199	1,200	23	10	492	437	41	36
Sandhills	1,763	1,966	10	0	1,008	890	57	45
Upper Platte	1,540	1,281	34	20	803	738	52	58
Wahoo	1,399	1,507	0	0	464	470	33	31
TOTALS	31,316	30,495	26	16	14,687	13,399	47	44

(1) Antlerless mule deer illegal

(2) 100 permits, valid in only small portion of unit

#### ANTELOPE

The summer population of antelope in four units was estimated at 3,850 a 4 percent decrease from 1970 and 27 percent below 1969. Box Butte and Cheyenne units showed increased populations, which were offset by a decrease in the North Sioux. The productivity index of 59 kids per 100 does was the same as in 1969 and slightly higher than 1970. However, it was the third lowest recorded and considerably below the average of the previous 16 years (69 kids per 100 does).

Drawings were held for permits in all antelope units. During the season (September 5 through October 3), 962 antelope were harvested by 1,208

permittees. Hunter success was 80 percent, about the same as the previous 2 years. The Cheyenne Unit was closed to hunting because of apparently excessive harvest the preceding several years.

During the 70-day archery season, 95 permits were issued and hunters took 10 antelope.

Table 3. Antelope harvest and success, 1970 and 1971

Management Unit	Permits		Harvest		Percent success	
	1970	1971	1970	1971	1970	1971
Banner	251	100	188	79	75	79
Box Butte	499	254	380	197	76	78
Brown	0	35	---	23	--	66
Cherry	125	152	106	105	85	69
Cheyenne	51	0	41	---	80	--
Dismal	77	128	60	100	78	78
Garden	203	102	165	85	81	83
North Sioux	451	400	375	340	83	85
Rock	0	37	---	33	--	89
TOTALS	1,657	1,208	1,315	962	79	80

#### TURKEY

During the spring season, April 24 through May 3, 1,192 permittees bagged 269 gobblers for an overall success of 23 percent. On opening day, weather was good only for the first few hours; intermittent rain and snow on the rest of the first three days undoubtedly contributed to lowered success.

The fall season extended from October 30 through November 14, with only the Niobrara and Round Top units open to hunting. There were 1,700 valid permits, and hunters bagged 835 birds for a success of 49 percent.

Brood routes in the Round Top Unit indicated turkey populations were about 40 percent below 1970, and that production per hen was lower than the preceding year. Hunting season results indicated higher turkey numbers and more young per adult hen. Reasons for these discrepancies are unknown.

Thirty-four turkeys trapped at two sites were marked with leg bands, wing buttons, and colored plastic streamers. Each of the birds was released at the trap site.



Table 4. Turkey hunting success, 1970 and 1971

Management Unit	Permits Issued		Harvest		Percent success	
	1970	1971	1970	1971	1970	1971
<u>Spring Season (April 24 through May 3)</u>						
Halsey	25	25	4	1	16	4
Niobrara	250	300	43	72	17	24
Round Top	746	750	98	159	13	21
Silver Creek	25	0	1	--	4	--
Southwest	43	42	12	9	29	21
Verdigre	50	25	14	17	28	68
Wildcat	50	50	12	11	24	22
SUB-TOTAL	1,189	1,192	184	269	15	23

Furbearers

The calculated fur harvest of 83,430 animals for the 1970-71 trapping season was 19 percent below the 1969-70 harvest and 24 percent below the past 5-year average (109,300). Calculated value of the harvest was \$155,855, a decrease of 37 percent from last year. The average take per active trapper was 48 furbearers worth \$89. Of the 1,915 permit buyers, 91 percent actively engaged in trapping. Results of the postal questionnaire are shown in Table 5.

Table 5. Statistics of the 1970-71 fur harvest by species

Species	Percent Taking	Average Price	Average Take Per Active Trapper	Calculated Harvest	Calculated Value of Harvest
Muskrat	71.3	\$ .73	35.9	43,857	\$35,666.00
Beaver	49.8	6.85	8.3	7,907	54,163.00
Mink	45.5	4.47	4.3	3,744	16,736.00
Raccoon	59.8	1.90	13.7	15,636	29,708.00
Skunk	10.2	.96	3.2	617	592.00
Opossum	22.3	.41	4.4	1,859	762.00
Civet	2.2	1.10	3.2	136	150.00
Badger	7.9	1.99	1.4	206	410.00
Bobcat	1.0	12.75	1.6	31	395.00
Weasel	1.2	.28	1.2	27	8.00
Coyote	20.9	3.75	10.1	4,024	15,090.00
Fox	8.3	4.91	2.4	388	1,905.00
TOTAL				83,432	155,585.00

## Waterfowl

Aerial surveys in May, 1971 indicated duck breeding numbers of 95,950 in the Sand Hills and 10,640 in the south-central rain-basin area. The Sand-Hills population was 16,450 below the previous year and the rain-basin population was 3,000 above that recorded in 1970. Windy conditions reduced observability on both surveys. Results represent minimum breeding populations. Blue-winged teal, mallard, gadwall, and shoveller comprised 79 percent of the population. Seven other species were also identified. Blue-winged teal numbered 28,900, an increase of 10,800. Mallard figures were 22,300, which was 2,340 below the 1970 population.

The Sand Hills breeding habitat was considerably improved from the past three years. The May water index was 27 percent above that of 1970. The water index for the rain-basin area was slightly below 1970 and 18 percent under 1969.

Ground transect data in the Sand Hills indicated brood numbers down 11 percent, and the number of ducklings up 13 percent. A random sample of 43 broods from the rainbasins averaged 6.9 ducklings per brood representing 4 species. Spring and early summer rains were good and water conditions improved somewhat from the 1970 drouth. A generally rainless summer failed to maintain the spring gains.

Banding efforts resulted in 102 white-fronted geese being banded during the spring in the south-central part of the state while 146 local ducks were banded during summer trapping (88 in rainbasin and 58 in the Sand Hills) 1,340 whitefronts were trapped and banded in a cooperative effort in Saskatchewan, Canada and about 2,000 wintering mallards were trapped and banded at 5 locations in January and early February, 1972.

The second year of releases of Canada geese in the Sand Hills restoration project was made in early July, 1970. A total of 185 geese was released on 6 lakes in western Brown County and eastern Cherry County. Of the released birds, 166 were goslings and 19 were adults culled from the production flock at the Sacramento Game Management Area. The 1970 and 1971 releases brought the total to 252 goslings and 27 adults. The three release sites in western Brown County were Clapper Marsh, South Twin Lake, and Long Lake, and in eastern Cherry County they were Ballards Marsh, West Twin Lake, and Middle Marsh. The 1971 hunting regulations again closed a substantial portion of the north-central Sand Hills to dark goose hunting.

Duck-hunting regulations for the 1971-72 season were basically 70 days and 100+ point bag. The High Plains Mallard Management Unit (approximately the west half of the state) received an additional 20 days extending the season through January 9, 1972, in that part of the state. The duck season was closed the first three days of November. The season opened October 9. Despite liberal regulations, duck hunting was generally poor considering the state as a whole.

The goose season extended 75 days from October 2 through December 15. In general, the season appeared to be average to good except for the middle fourth of the state, which experienced one of its best seasons.

Final harvest figures are not available for the 1971 season. Since the harvest data for the 1970 season were not calculated until after last year's annual report was prepared, it is included in this report.

Table 6. Species Harvest of Waterfowl, 1970 Season

Species	Harvest	Species	Harvest
Mallard	203,240	Woodduck	2,230
Green-winged teal	38,230	Merganser	956
Blue-winged teal	23,890	Other and Unknown ducks	3,500
Pintail	11,150	Canada goose	16,858
Gadwall	14,016	Snow & blue goose	17,296
Baldpate	6,372	White-fronted goose	1,317
Shoveller	4,140	Unidentified geese	728
Scaup	4,460	Coot	4,132
Redhead	3,500	Snipe	2,560
Canvasback	1,912		
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TOTAL DUCKS	318,560		
TOTAL GEESE	36,200		
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## UPLAND GAME

### Pheasant

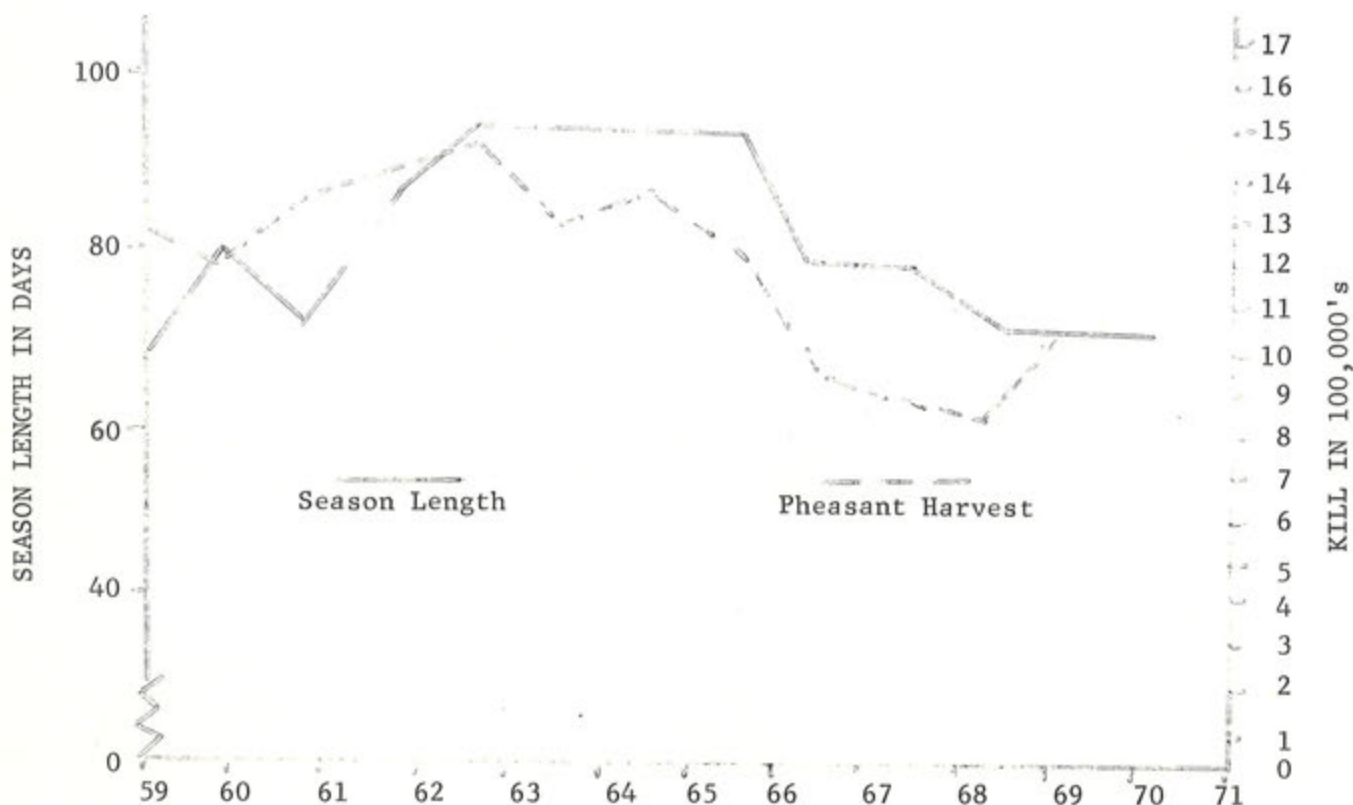
All mid-summer surveys conducted to determine the pheasant population level showed a slight decline in numbers statewide. The rural mail-carrier survey, conducted in late July, indicated approximately a 7 percent drop from the 1970 level. Carriers showed slight declines (less than 5 percent) in the northeast, central, and southwest areas and approximately an 8 percent drop in the southeast and panhandle areas. The Sand Hills unit showed a 32 percent decline in pheasant numbers.

Conservation officers and biologists indicated increased brood size from 1970. The peak of hatch occurred June 6-12 in the Sand Hills and southwest, but was as late as June 20-26 in the central and panhandle units.

The 1971 hunting season was 72 days in length, November 6 through January 16. Limits were set at 3 daily and 12 possession. Season length and bag limits were statewide except that Knox County was closed to pheasant hunting.

Opening weekend check stations recorded hunting success at 1.1 birds per hunter-day statewide. This is the same as recorded in 1970. The central and southeast areas showed declines in hunting success of 9 percent and 18 percent respectively. The northeast and panhandle showed slight increases in success. Success in the southwest remained the same. Weather conditions during the opening weekend were favorable with strong winds and cold weather the only detrimental factors.

Figure 1. Pheasant harvest and season length, 1959-71.\*



\* Season length in 1968 and 1969 was 7 days shorter in the southeast than is shown. Harvest data not yet available for 1971.

## Quail

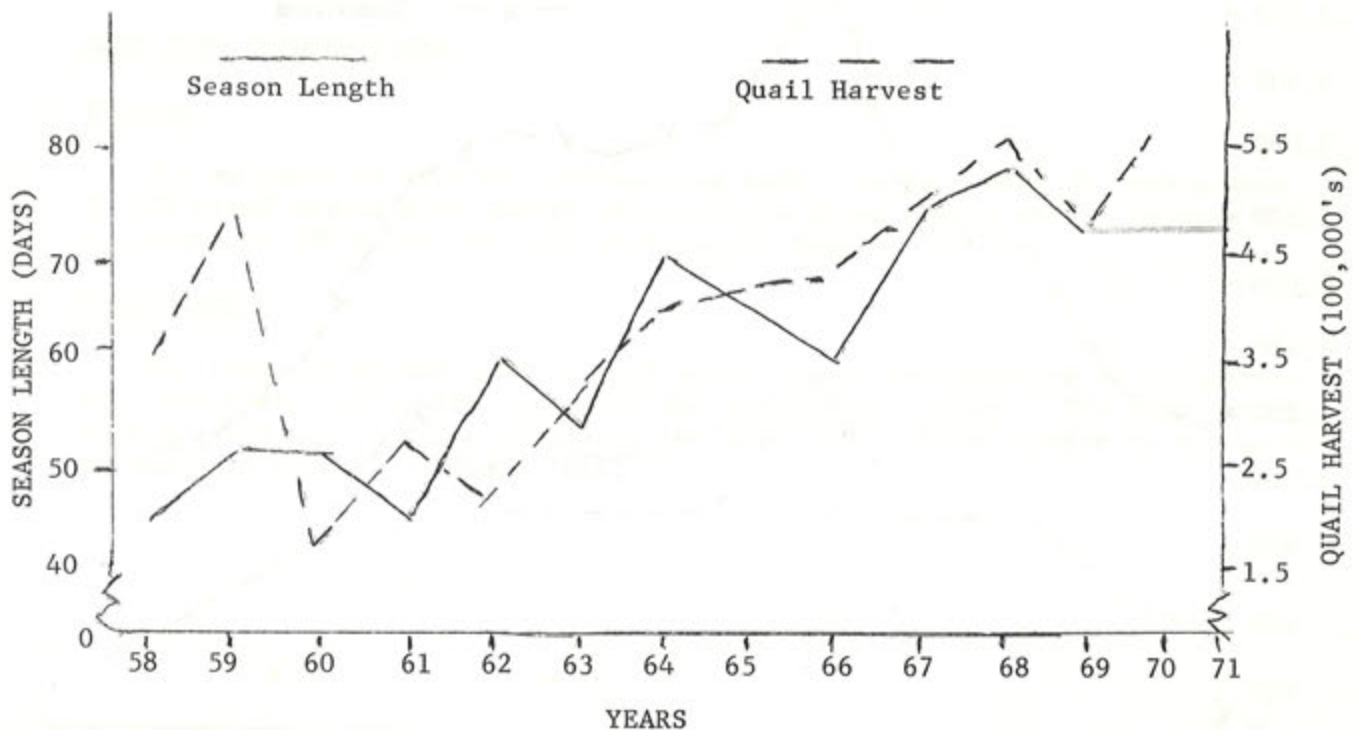
Quail whistle count surveys conducted by Commission personnel showed a statewide decline of 7 percent. A major increase was recorded in the east-central area and a slight increase in the north-central area. The northeast indicated no change while the southeast was down 7 percent. The West Platte and Republican areas showed major declines in quail numbers.

Rural mail carriers recorded a 5 percent drop in the statewide quail population. Agreement with the whistle-count survey occurred in the West Platte and Republican areas but the mail carriers showed a major increase in quail numbers in the north-central and northeast and a major decline in the southeast.

The 1971 hunting season was concurrent with the pheasant season, opening November 6 and closing January 16. Limits were 6 daily and 16 in possession. Dates and limits applied statewide.

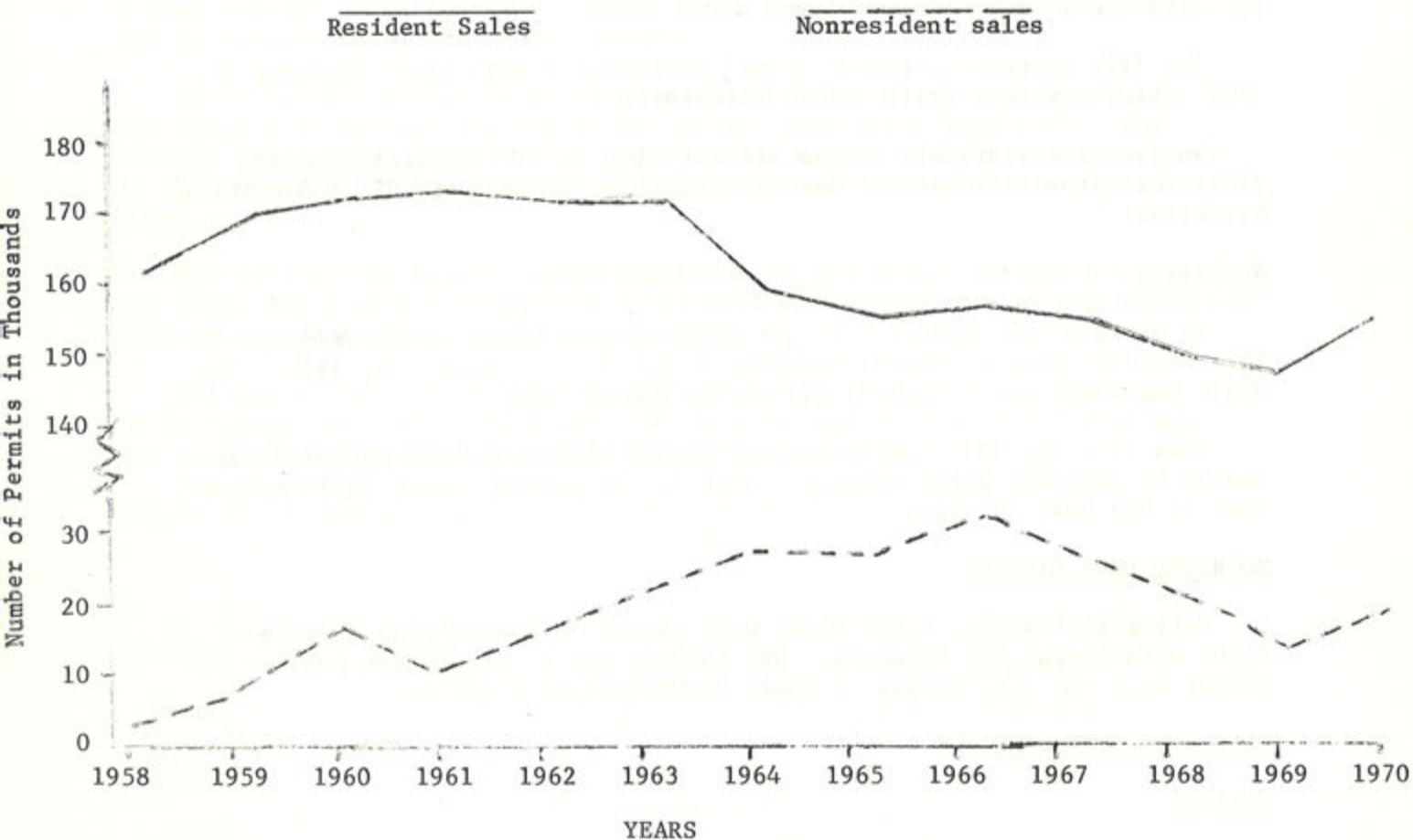
Opening weekend check station data from the southeast area showed a very slight decline in hunting success (2.9 quail/hunter bag in 1971 and 3.0 in 1970).

Figure 2. Length of quail season and harvest, 1958-71.\*



\* Harvest data not yet available for 1971.

Figure 4. Trend in hunting permit sales, resident and nonresident.



#### NON-GAME

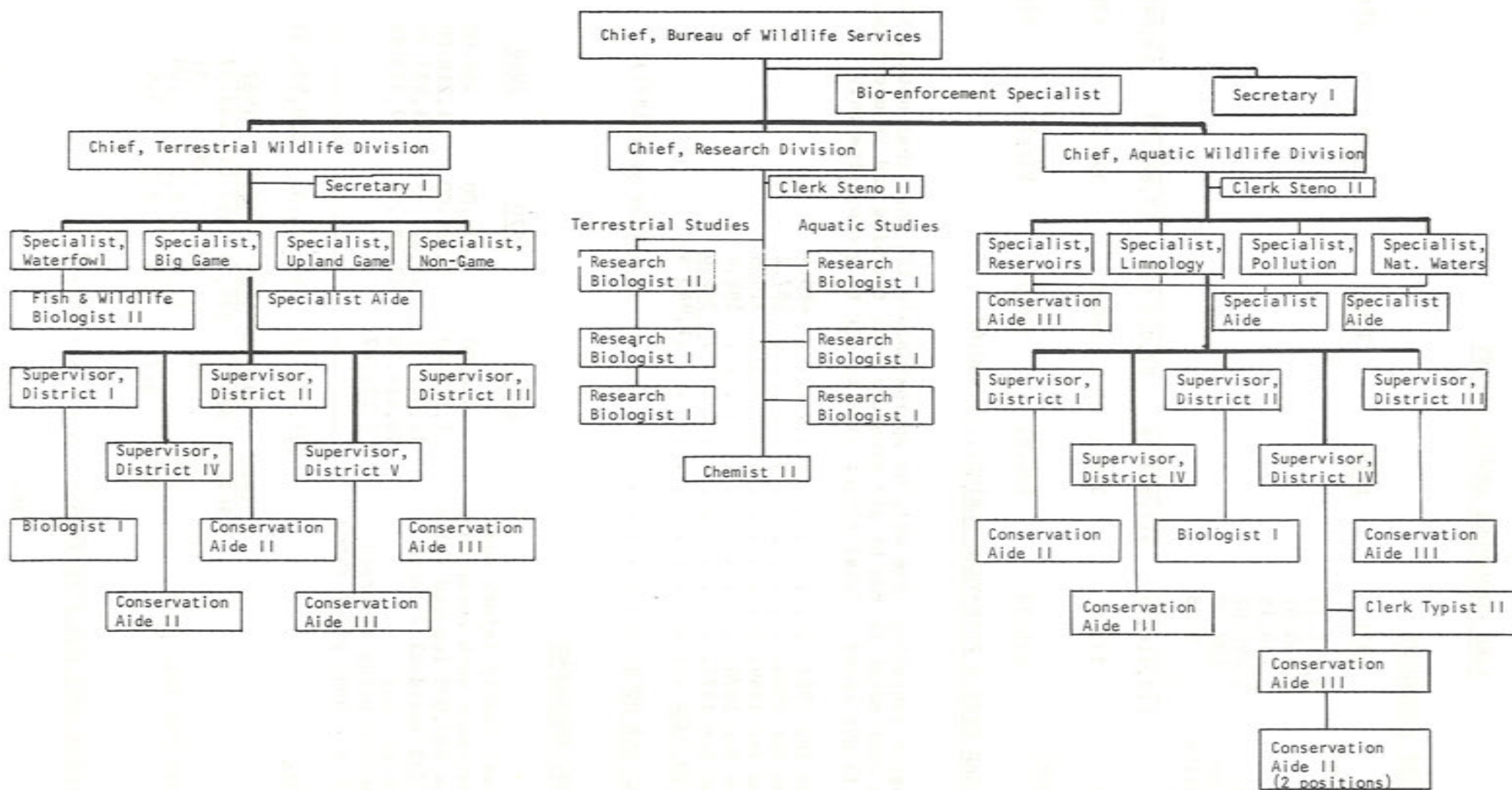
Work was initiated in July to develop a program for the study of various non-game species of wildlife. Primary objectives are to establish and investigate the status, distribution, and population trends of the black-footed ferret, black-tailed prairie dog, birds of prey, canine predators, crows, and jackrabbits, as well as maintaining records of rare and endangered species.

A falconry program was prepared for implementation in early 1972. This program will permit the licensing of falconers after they have passed a written examination and have had their facilities for keeping raptors inspected.

A random roadside survey of raptors initiated in 1968 and discontinued in early 1971 was updated and resumed. The survey primarily involves the recording of all hawks and owls observed and the miles driven. Data collected during the last six months of 1971 has not yet been compiled. Information on hawks and owls observed between March 1970 and February 1971 are shown in Table 7.



Organization Chart for year 1971



# AERO COMMANDER ANNUAL REPORT

## DIRECT OPERATING COST BREAKDOWN

	<u>1971</u>	<u>1970</u>	<u>1969</u>	<u>1968</u>	<u>1967</u>
Aircraft Maintenance & Radio Repair	3,717.23				
Gasoline	4,940.01				
Oil	156.15				
Storage and Preheat	1,490.02				
Charts & Publications	102.00				
Miscellaneous Supplies	9.38				
	<u>\$10,414.79</u>	<u>\$17,852.96</u>	<u>\$7,823.98</u>	<u>\$7,842.79</u>	<u>\$9,649.23</u>

<u>TOTAL HOURS FLOWN*</u>	333.3	351.3	290.3	352.0	439.5
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## DIRECT OPERATING COST

<u>PER HOUR</u>	\$31.28	\$50.81	\$26.95	\$22.35	\$21.98
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AVERAGE COST PER YEAR OVER A FIVE-YEAR PERIOD.....\$30.67

\*Total aircraft engine operating time will be approximately 10% more than noted, since aircraft recording hour meter is run by air pressure over the wing and is operating only when aircraft has flight speed. Total flight time is air to ground time only.

Total time for 1967. . . . .	483.4
Total time for 1968. . . . .	387.2
Total time for 1969. . . . .	319.6
Total time for 1970. . . . .	386.6
Total time for 1971. . . . .	366.6

TOTAL ENGINE TIME TO DATE . . . . .1,943.4

AVERAGE GALLONS GAS PER HOUR. . . . . 30.4 (for year 1971)

## TOTAL OPERATING COST BREAKDOWN

	<u>1971</u>	<u>1970</u>	<u>1969</u>
\$500,000 single limit bodily injury and property damage insurance each occurrence	414.00	415.00	455.00
Hull All Risk Basis \$80,000 insured value	1,133.00	1,189.00	1,218.00
Depreciation with 25% residual 7 years	11,027.37	11,027.37	11,027.37
Total direct operating cost	10,414.79	17,852.96	7,823.98
Payments other agencies using aircraft (\$60 per hour; \$6 per hour pilot time)	- 1,225.47		

<u>TOTAL OPERATING COST</u>	<u>\$22,376.27</u>	<u>\$30,484.33</u>	<u>\$20,524.35</u>
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	<u>1971</u>	<u>1970</u>	<u>1969</u>	<u>1968</u>	<u>1967</u>
Per Hour	\$67.20	\$86.77	\$70.77	\$57.87	\$49.57
Per Mile	.37	.47	.67	.33	.31
Total Operating Cost Per Seat Mile	6.5		11.9	6.2	.05
Seat Load Factor	5.7	5.7	5.6	5.3	5.6

AVERAGE TOTAL PER-HOUR COST FOR FIVE YEARS. . . . . \$66.44

## EXPENSES FOR AERO COMMANDER FOR 1971

	GAS	COST	OIL	COST	REPAIRS	GAS DIS.	MISC.	STORAGE	TRIPS	HOURS NIGHT	LOAD FACTOR	HOURS I.F.R.	HOUR PER MONTH
JANUARY	721.8	350.78	8	5.79		2.65	1.71	131.50	9		5.8	2.20	24.2
FEBRUARY	492.7	233.77	25	16.25	1002.19	2.85		126.00		5.00	6.0	.30	18.0
MARCH	1041.7	520.70	15	9.93	66.52	5.46		115.00		4.00	6.3	6.00	34.2
APRIL	1440.3	700.21	34	22.00	340.19	7.58		114.02	11	5.00	5.9	1.50	51.8
MAY	836.0	403.49	9	5.85	272.56	6.83		117.50	9	2.00	6.4	2.30	28.5
JUNE	784.8	377.52	27	16.25	3.50	5.49		122.00	8	2.00	6.0		25.7
JULY	498.8	271.44	9	6.34	245.24	3.72	3.50	125.00	7	1.00	4.2		20.6
AUGUST	955.7	452.56	32	21.04	589.92	7.91	.22	115.00	7	2.00	4.1		27.5
SEPTEMBER	688.4	344.18	7	4.55	184.00	5.03	3.95	129.00	5		5.3	3.00	28.4
OCTOBER	728.4	358.16	6	3.90	25.00	6.29		125.00	12	.30	5.4	.25	30.4
NOVEMBER	1458.6	702.97	62	40.35	23.97	4.10		139.00	6	3.30	6.3	3.30	28.7
DECEMBER	471.5	224.23	6	3.90	964.14	82.36		136.00			6.2	1.00	15.3
TOTALS	10118.7	4940.01	240	156.15	3717.23	140.27	9.38	1495.02	74	24.60	5.7 Ave.	19.85	333.3



Charges to other agencies for 1972 will be based on an agreement with the participating agencies in the aircraft scheduling pool of \$60 per hour plus \$6 per hour for pilot time. Charges to other divisions within the Game Commission for 1972 will be based on the direct operating cost for 1971 of \$31.28.

BREAKDOWN OF AIRCRAFT USED BY DIVISIONS

	<u>1971</u>
Administration	101.1
Fisheries	34.0
Game	21.3
Information and Education	14.6
Wildlife Services	15.8
Law Enforcement Survey & Patrol	15.1
Engineering	9.1
Parks	7.8
Research	16.7
Planning & Programming	25.7
Commissioners	24.2
Civil Defense	5.4
Fiscal	8.7
Pilot Proficiency - Maintenance	6.3
Department of Aeronautics Aircraft Pool	23.0
Personnel	<u>4.5</u>
TOTAL HOURS FLOWN	333.3

<u>HOURS OF DAY FLYING</u>	308.7
<u>HOURS OF NIGHT FLYING</u>	24.6
<u>HOURS OF INSTRUMENT FLYING</u>	19.8-



